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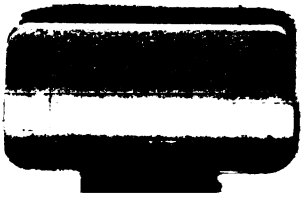
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GIFT OF

Sir Redmond Barry

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LECTURE

ON THE

HISTORY

OF THE

ART OF AGRICULTURE,

DELIVERED BEFORE THE

Melbourne Mechanics' Institution,

FRIDAY, MAY 1,

A.D. 1840.

BY

REDMOND BARRY, ESQUIRE,

BARRISTER-AT-LAW.

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"O fortunatos nimium sua si bona norint,
Agricolas!"

Virg. Geor. lib. ii. l. 458.

Good.—It is a recipe,
From lucre art and sorcery free;
Thou'st but to betake thee to the field,
And there the spade and pick-axe wield;
Keeping thyself and vagrant mind
Within a circle well confin'd;
Support thyself with unmixed food,
Herd with the herd as beast, and find it good;
Dunging thyself the acres thou dost harvest.
That is the recipe, and faith the very best,
To keep one young for eighty years at least.

Mephistophiles.—Faust.

Both Erudition and Agriculture ought to be encouraged by Government—wit and manufactures will come of themselves.—Tallyrand.

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LECTURE.

Ladies and Gentlemen,

Agriculture (the history of which I have selected to address you on this evening), is an occupation which may justly be ennobled with the title of * "the parent of most of the numerous subdivisions of employment which call forth the industry of civilised man, or elicit the skilful application of inventive genius," the foundation and groundwork of manufactures, "since the productions of nature are the materials of art," the laborious exertions of the Agriculturist supply those useful commodities which relieve the demands of our natural exigencies, gratify those calls which are collateral and adventitious, and indulge those desires which ideas of comfort have created, as well as those generated by luxury.

It is from the connexion which exists between this useful art, and many of the highest branches of mechanical science, by which its various operations are assisted and expedited, as well as by which its products are with wonderfully greater facility than by ordinary means reduced from the raw material and rendered available to suit the wants and wishes of mankind, that the subject of Agriculture appeared to me well calculated for a lecture before this institution: and whlle I lamented my want of practical acquaintance with the subject as it relates to this country, I consoled myself with the hope that, were I to deliver a brief outline of the History of the Art, with occasional deductions in the course of it, I might meet the indulgence of the members, and perhaps have the good fortune to draw the attention of some one present to instruct the community on this most useful of arts at some future period, with a lecture more deserving of your favourable consideration.

The investigation of this subject naturally leads us to the contemplation of man, in the unsophisticated state of primeval simplicity. His desires limited to the gratification of the cravings of nature, his wants few, his wishes simple, his enjoyments partaking rather of a passive than active character, his early history would

* Gibbon's Decline and Fall, chap. xi.

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present us with little to afford either interest or instruction, were it not that within his mortal frame was lodged a particle of that divine spirit which released him from communion with the beasts of the field; established his undisputed sovereignty over them; stimulated him to efforts which developed the inexhaustable resources of his fertile imagination, and finally, elevated him to that glorious eminence from which he can look downwards with satisfaction on creation as subservient to his will and conducive to his happiness, and upwards to his Creator with lowly aspirations of thanksgiving and praise.

It is to present the astonishing contrast between man in his original condition.

"When first in woods the noble savage ran,"

and in the advanced state of refinement to which he has arrived, that I have ventured to commence at so early a period, and also, because it will enable me to show that Agriculture is entitled to respect, as having first aroused the human intellect to declare itself, and as having encouraged man to apply his abilities to the accomplishment of other purposes, which gradually led to the achievement of such enterprises in discovery and invention as render him in reality "the greatest wonder of nature."

Following then the records of creation given in the Bible, we are furnished with distinct evidence that one of the objects which the Deity had in contemplation in forming man was, that he should apply himself to the cultivation of the earth; for we find *"These are the generations of the heavens and of the earth when they were created, in the day that the Lord God created the earth, and the heavens; And every plant of the field before it was in the earth, and every herb of the field before it grew; for the Lord God had not caused it to rain upon the earth, and *there was not a man to till the ground.*" Here, you observe, before it pleased the Creator to express an intention of supplying a population for the world which had issued fresh from the mould of his Almighty fiat, the employment of the man who was to be created, is expressly designated.

And as the earth had not at that period received the anathema †"Thorns also and thistles shall it bring forth to thee, and thou shall eat the herb of the field; in the sweat of thy face shalt thou eat bread," still a duty is by anticipation imposed on man, wisely and kindly imposed; that a moderate proportion of labor should regulate his health, stimulate his appetite, impart a relish for his food, ensure refreshing slumber, and rescue him from that

* Gen. c. ii., v. 4, 5.
† Gen. c. iii., v. 8, 18 and 19.

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listless state of inactivity consequent on a total absence of employment.

It having been decreed that man was to enjoy the pre-eminence over other animals, and to walk forth amidst the domains of nature as "lord of the creation," the structure of his frame and the peculiar adaptation of the limbs and members of his body, are admirably calculated to enable him, under the guidance of superior intellect, to derive means of subsistence from the labour of his hands, to reduce several of the brute creation to a state of obedience to his will in furtherance of it, and thus to render him independent of the precarious and uncertain modes of existence afforded by the chase, or of relying on the gratuitous productions of the earth. The latter peaceful and tranquil mode of supporting life seems, however, to have been preferred to the former by our first parents. Placed in a garden, abounding with every variety of fruit-bearing trees, they preferred the quiet task of preparing for their daily meal by selecting the ripest and most inviting of the productions around them. To them, while a supply of food was abundantly afforded by the liberal hand of nature, a course of toilsome labor was unnecessary; and we may suppose that the primitive cultivator was called on for little more than to protect those choice trees which supplied him spontaneously, to restrain their luxuriance, or to foster their growth.

In fact, the offices of the first man are particularly mentioned, when we read that * "the Lord God took the man and put him into the Garden of Eden, to dress it, and to keep it." This simple duty, while in a state of innocence, is with infinite grace described by Milton; where, after pouring forth their orisons,

> "More tuneable than needed lute or harp.
> To add more sweetness."

Adam and his partner Eve go forth to the labours of the day.

> "On to their morning's rural work they haste
> "Among sweet dews and flowers; where any row
> "Of fruit trees over woody reach'd too far
> "Their pamper'd boughs, and needed hands to check,
> "Fruitless embraces: or they led the vine
> "To wed her elm; she spous'd about him twines
> "Her marriageable arms, and with her brings
> "Her dower, the adopted clusters, to adorn
> "His barren leaves."†

It may not be out of place to observe, that the exact situation of the Garden of Eden has not been decided on, although its topographical features are so clearly defined in the Bible; and the

* Gen. II. v. 15. † Paradise Lost, lib. v. l. 211.

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commentators adhering to the circumstance of there being a river parted into four heads, have assigned to it various geographical positions.

Sir Walter Raleigh, in his History of the World, (principally composed during his long imprisonment in the tower, from 1603 to 1618), has collected the authorities and enumerated the several sites, as handed down by remote traditionary testimony, or selected by the speculation of antiquarians.

The neighbourhood of Mount Ararat, and different districts of Mesopotamia, Persia and Arabia, have each, in their turn, been fixed upon; and, while the fertility of the soil, the serenity of the climate, and the abundance of fruit-bearing trees, have induced some to place it in the vicinity of Damascus; the Mahomedan asserts that Paradise was in the Isle of Topobrana or Serendib, our Ceylon; the Indian, on the other hand, has liberally allowed a fifth river to water the Garden, and placed it in the Punjaub.

Müller again has supposed that the cradle of the human race seems to be that place where bread corn, the universal food of mankind (as he assumes it to be), in indigenous; and he quotes *Theophrastus, the eloquent disciple of Aristotle, who says that barley grows wild in the high lands behind the Caspian Sea.

A pupil of Linæus, he also adds, in his travels to collect materials and specimens for that great naturalist, coroborates this testimony; but, he says that he also found corn growing wild in Bashkiria, Kashmere, and Thibet, and, that in the north of China, it grows many years without sowing or tillage.

But, in adducing instances of so many countries in which corn is indigenous, Müller appears to have proved too much; and to have perplexed rather than established his position: nor, unless we suppose the grain to have been eaten raw, or perhaps parched, do I lean to the opinion that man, in the earliest generations, advanced to such ingenuity as to be acquainted with the mode of

* Theophrastus was a native of Eresus, in Lesbos: his original name was Tyrtamus. Aristotle made him change it to Euphrastus, and afterwards to Theophrastus, to denote his excellent choice of language. When the disciples of Aristotle were anxious to ascertain which of them he wished to be his successor, and entreated him shortly before his death to appoint one whom they should follow, he was perplexed, and found a difficulty whether to name Theophrastus or Eudemus, or Menedemus of Rhodes. After some hesitation, he called for Lesbian and Rhodian wine, and having tasted each, he said "both are indeed excellent, but I prefer the Lesbian."

They concluded from this expression, that his leaning was in favour of Theophrastus.

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preparing corn for food, by the tedious process of beating it out of the husk, and grinding or triturating it into meal or flour. It is moreover a manifest assumption of the question to say that corn was the food of the first man; for * Ælian describing the most ancient food of the several nations he treats of, reports that in Argos they feed chiefly on pears, in Attica on figs, in Arcadia on acorns, whence the Arcadians were called by Lycophron Balanefagoi, or acorn eaters; and trees which bore acorns or masts, were in general termed Fagoi from Fago, to eat, (hence the Latin Fagus a beech); as in Latin "Esculi" from Esca food.

Adelung (cited in Mr Lawrence's Lectures), puts the matter in a newer and broader light, he says—

As nature would not unnecessarily expose her first-born and unexperienced son to conflicts and dangers, the place of his early abode would be so selected that all his wants would be easily satisfied, and everything essential to the pleasure of his existence readily procured; he would be, in short, placed in a Paradise.

Such a country is found in Central Asia, between the 30° and 50° W. L. and 90° and 110° E. L. from Ferro, a spot which, in respect to height, can only be compared to the lofty Plain of Quito, in South America. From this elevation, of which the great desert of Cobi or Shamo is the vertical point, Asia sinks gradually towards all the four quarters. The great chains of mountain running in various directions arise from it, and contain the source of the great rivers which traverse this division of the globe on all sides. The Selunga, the Obi, the Lena, the Irtish, and the Yenisei, on the north; the Jaik, the Jihon, the Jemba, on the west; the Amuer, the Hoang Ho on the east; the Indus, Ganges, and Burhampooter, on the south.

If, he says, the globe were ever covered with water, this great table land must have first become dry, and have appeared like an island in the watery expanse. The cold and barren desert of Cobi would not indeed have been a suitable abode for the first people; but, on its southern declivity, we find Thibet, separated by high mountains from the rest of the world, and containing, within its boundaries, all varieties of air and climate. If severe cold prevailed on its snowy mountains and glaciers, a perpetual summer reigns in its valleys and well watered plains.

This is the native abode of rice, the vine, pulse, fruit, and all other vegetable productions from which man draws his nourishment. Here, too, all the animals are found wild, which man has tamed for his use, and carried with him over the whole earth :—

* Var. Hist. lib. 3., chap. 39.

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The cow, horse, ass, sheep, goat, camel, pig, dog, cat, and even the servicable rein-deer, his only attendant and friend in the very deserts of the frozen polar regions.

Close to Thibet, and just on the declivity of the great central elevation, we find the charming region of Kashmere, where great elevation converts the southern heat into perpetual spring, and where nature has exerted all her powers to produce plants, animals, and man, in the greatest perfection. No spot on the whole earth unites so many advantages. In none could the human plant have succeed so well without any care. This spot therefore, seems to unite all the characters of Paradise, and to be the most appropriate situation in Asia for the birth-place of the human race.

I will conclude this digression by reminding you of the description by Milton of the arrival of Satan in Paradise, for the purpose of working the fall of our first parents.

* "Nor where Abassin kings their issue guard
"Mount Amara, though this by some supposed
"True Paradise, under the Ethiop line
"By Nillus head, enclos'd with shining rock,
"A whole days journey high; but wide remote
"From this Assyrian garden, where the Fiend
"Saw, undelighted, all delight, all kind
"Of living creatures, new to sight and strange."

And again—

"For blissful Paradise,
Of God the garden was, by him in th' east
Of Eden planted: Eden stretch'd her line
From Auran eastward to the royal towers
Of great Seleucia, built by Grecian kings,
Or where the sons of Eden long before
Dwelt in Telassar: in this pleasant soil
His far more pleasant garden God ordain'd."

In the absence of direct testimony, conjecture or probability can be our only guide. However, it seems probable to me at least, that the first Agricultural operations of man were confined to delving in the ground, for such roots as curiosity or hunger prompted him to taste, or such as he may have beheld to be the favourite repast of some animal, and consequently judged to be innocuous.

We learn that, at a very early period, there appears to have been a distribution of the rural operations. The pastoral and

* Paradise Lost.—Lib. iv. l. 280.
† Lib. iv. l. 208.

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Agricultural duties were severally adopted by the two sons of Adam. Cain is described in general terms to have been "a tiller of the ground;" while Abel collected a flock of the most inoffensive of quadrupeds, and domesticated the docile sheep.

After the succesion of about six generations, we arrive at the name of Jabal, "who was the father of such as dwell in tents, and of such as have cattle." Thus, we observe the progressive advancement of man in his social condition—his flocks and herds supplied him with milk curds, and whey, and the occasional sacrifice of a lamb, a kid, or calf, in addition to the fruits and pulse afforded as the liberal donation of nature furnished him with the means of subsistence. And, singular to say, in those regions of the east inhabited by the nomadic tribes of Arabs, Kurds, and Turcomans, at this day, human life is supported without any greater exertion. His raiment was composed of the skins of his sheep, and after some ages, their fleeces were made to serve that purpose. His tent we may suppose to have been formed of the hides of his cattle; and being now sheltered from the inclemency of the seasons, and above the demands of actual want, his restless mind suggested several experiments to afford him additional comforts, and next to supply him with luxurious superfluities.

It is not a little curious to observe, that the first dawn of mechanical ingenuity should have presented itself in the fabrication of a musical instrument, invented perhaps by a shepherd, to relieve the tedious hours of his solitary employment: for Jubal, son of Lamech and Adah, is called "the father of all such as handle the harp and organ." The Greek term organ, signifies generally, a musical instrument. The first could not have been very complicated.

After this we are informed that Tubal Cain, son of Lamech and Zillah, was "an instructor of every artificer in brass and iron." His attention might have been attracted by some one of the metals in the course of husbandry, when digging rather deeper than usual into the earth; yet, I apprehend, that mention of brass, although it occurs repeatedly in the Bible, * must be an error of the translators, and it probably should be rendered "copper," of which Pliny enumerated the "regulare" or malleable "coronarium" or plate, and "caldarium" or cast: for "brass," is not a

* Deut. chap. viii. v. 9.—Out of whose hills thou mayest dig brass.
Job chap. xxviii. v. 2.—Iron is taken out of the earth, and brass is molten out of the stone.

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primitive metal, but an alloy of copper and zinc, united by mixing granulated copper with caladmine, (native carbonate of zinc) and charcoal; and this would not occur unless we adopt the possibility of such natural alchemy as is suggested by Milton.

* "In other part stood one who at the forge
Stood lab'ring two massy clods of iron and brass
Had melted, (whether found where casual fire
Had wasted woods, on mountain or in vale,
Down to the veins of earth, thence gliding hot
To some caves mouth, or whether washed by stream
From under ground), the liquid ore he drained
Into fit molds prepared."

However, we read of the metal in Homer, also translated brass: the weapons of some of his heroes being made of it, and the imaginative antiquarian, General Vallancy, rests one of his arguments for the Carthagenian origin of the Irish people on the similarity in the form and construction of the brazen swords found in Ireland and those found on the field of Cannæ, the scene of the memorable battle fought between Hannibal and the Romans, B. C. 216.

With respect to iron, it is not unworthy of remark, that the Peruvians, amongst the most skilful aboriginal people on either Continent of America, were unacquainted with its use, although the ore abounds in their country; and, while gold and silver, with various alloys, were applied by them to the most ordinary purposes. They adapted stone and copper to the fabrication of tools in common use; and by a very remarkable combination of copper and tin, in the proportion [according to Humboldt, who analysed some metalic implements, found in a silver mine, opened by the Incas, near Cuzco] of, copper, 0.94, tin, 0.6, they gave a hardness to the metal little inferior to steel, and were able to hew porphry, granite and the most durable marble.

Iron requires a tedious and ingenious process of smelting to reduce it from the ore,—a knowledge of which is not easily acquired by savage nations, whose usual substitutes are flint, quartz, obsidian, the Nephritic stone called jade, or the wood of some tree peculiar in its compactness; and it may be doubted whether mankind was not for some time acquainted with the familiar use of other metals before they acquired a knowledge of iron.

* Paradise Lost.—Lib xi. v. 564.

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Lucretius* bears testimony to this; and Ovid† in his poetical and metamorphical arrangement of the metallic eras, place that of iron last.

Before I proceed further, it may be well to observe, that we owe to the Art of Agriculture another proud distinction, that of having originated the ideas of the "rights of property."

For the earth, and all things therein, were, in the first instance, declared to be the general property of all mankind, exclusive of all other beings; and, while the human family was confined to but few individuals, each took from the public stock to his own use without molestation such things as his necessities required. These general notions of property were then sufficent to answer all the purposes of a primitive society; and had the human race continued in a state of such simplicity, would have continued to be sufficient.

The ground being in common, no part was the permanent property of any person in particular.

Whoever was in the occupation of any determined spot for rest, shade, or any other purpose, acquired for the time a sort of ownership therein, from which it would have been contrary to the law of nature to have dislodged him: But the right of possession lasted only as long as the act of possession continued; for the instant he quitted the use or occupation of the soil, another might seize it without injustice.

Thus, also, a vine or other tree might be said to be in common, as all men were equally entitled to its produce; yet, any individual, were he to gather the fruit for his own repast, might gain by the exercise of the labour exclusive property in the fruit.

When mankind increased in number, craft, and ambition, it became necessary to entertain conceptions of more permanent dominion, and to appropriate to individuals, not only the use but the very substance of the thing to be used, otherwise innumerable contentions must have arisen, and the good order of society would have been continually disturbed, while various persons contended who should get the first occupation of the same thing, or disputed who had actually gained it. The article of food was the most immediate call, and therefore demanded the earliest consideration; and the bodily labour expended on any thing, before

* Posterius Ferri vis est, ærisque reperta;
Et prior æris erat quam Ferri cognitus usus:
Quo facilis magis est natura et copia major.
Lucretius.—Lib l. v. 1294.

† De duro est ultima ferro.
Ovid Met.—Lib 1. L. 127.

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the common property of mankind, was allowed to give the most reasonable title to an exclusive property therein. The patriarchial system having been established, in addition to the permanent property vested in flocks and herds, that of tents, household furniture, and implements of husbandry, having become clearly defined and distinctly understood ; ideas of permanent property in the substantial soil itself, strengthened by an uninterrupted occupancy for a period of time, begun by usage to ripen into an established right. The support of cattle made the article of water a very important point, deficient in many regions of Asia, as well as we unfortunately know it to be in some parts of this country ; and as in districts where pasturage was abundant, a supply of that necessary was at times inadequate, people were compelled to dig wells,—a practice well worthy of imitation here ; which act confirmed the exclusive property in the digger or occupier, and about which the Bible gives us numerous instances of strife.

I may here paranthetically allude to some of the wise regulations of Solon, the Athenian lawgiver, on this subject ; who, to prevent disputes about water, which was very scarce in some parts of Attica, ordained; that if there be a public well within the distance of an Hippicum or length of an horse course, any person might make use of it ; if not, every person should dig one for himself.

If a man dug a well near the ground of another, he should have a space of 4 feet between it and his neighbours enclosure ; and if in sinking, he went 60 feet without finding water, he was allowed to draw twice a day from his neighbours well, six pitchers of water.

To return, while, as by degrees the world became more populous, and as by constantly occupying the same places, the fruits of the earth were consumed, and its spontaneous produce was destroyed without any provision for a future supply or a regular succession, the Art of Agriculture was, by the necessity of the case, produced, or at least, promoted and encouraged ; which, by a regular connection and consequence, introduced and established the idea of a more permanent property in the soil than had hitherto been received and adopted.

It was clear that the earth would not produce her fruits in sufficient quantities, without the assistance of tillage, but who would be at the pains of cultivating it if he were liable to be despoiled of the produce of his ind ustry, art, and labour, by the stronger hand of another too indolent to toil for himself, but sufficiently daring to commit such an act of injustice ? The development of Agriculture having then begotten and clearly established the right of property in "land," mankind soon perceived the superiority of a fixed and stationary condition of life, over that of wanderers upon the face of the earth, and recourse was had

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consequently to civil society, which brought with it a lengthened train of inseparable concomitants, consisting in the words of Blackstone of "states, governments, laws, punishments, and the exercise of religious duties." Thus connected together, it was found that a part only of society was sufficient to provide by their manual labour for the necessary subsistence of all, and leisure was afforded to others to cultivate the human mind, to invent useful arts, and to lay the foundations of science.

Agriculture does not however appear to have advanced at first universally, in a ratio proportionate to the increase of population: Nor were the arts of industry applied in general with a perseverance equivalent to the demands made on them; for we find at an early period of sacred history, at the time of the departure of Abram from the land of Haran, *"that there was a famine in the land of Cannan," which compelled him to continue his migration to Egypt; which country, even then seems to have produced more corn than was necessary for the consumption of its inhabitants.

The fructifying properties of the waters of the river Nile, were duly estimated by this active people; and as a shower of rain rarely falls in the serene climate of Egypt, they religiously imputed the rise of the stream [in reality caused by the tropical rains in Ethiopia,] to the benignant influence of their god Serapis.

In his temple, at Memphis, was erected a pillar, on which were inserted daily during the period of the overflow the degrees of its increase, which were promulgated with great solemnity throughout Egypt. The inhabitants of the provinces were by that means made acquainted beforehand with what they might fear or hope from the ensuing harvest. The Emperor Constantine, removed this pillar from the temple of Serapis to the Church of Alexandria, when the superstitious people were filled with apprehension that the river would not again overflow its banks.

Julian, the apostate, a zealous supporter of idolatry, caused the pillar to be restored to the citizens of Memphis; but it was again removed by command of the Emperor Theodosius.

Strabo speaks of a well on the banks of the river, near the town of Syene,† made for marking the rise of the waters of the river;

*Gen. chap. xii. v. v. 4 10. B.C. 1921.

† Memorable in history not merely for its marble, but that the satirist Juvenal was in the eightieth year of his age ordered to proceed there to take command of a Prætorian Cohort.

For this petulent instance of "Sell or Sail" on the part of the Roman "Horse Guards," his 16th Satire is (notwithstanding the doubts of Gibbon and others) a telling *Riposte*.

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and, during the last century, the rise of the waters was regularly proclaimed in the principal mosque, at Cairo; and the tribute paid to the Grand Signor was graduated by the height and extent of the inundation.

Shakspeare alludes to the fluctuation of this remarkable river, in a manner which illustrates his universal knowledge, and the art with which, by the introduction of topics of local importance or peculiarity he invests his dramas, the scene of which is laid in foreign countries, with an additional air of reality.

Ant—

"Thus do they Sir, they take the flow of the Nile
By certain scales i the Pyramid; they know
By the height, the lowness, or the mean if dearth
Or foizon follow: The higher Nilus swells,
The more it promises: as it ebbs, the seedsman,
Upon the slime and ooze scatters his grain,
And shortly comes to harvest."

Anthony and Cleopatra.—Act II. Sc. vii.

The fruitfulness of Egypt, was of old and still is proverbial; and is to be attributed altogether to the inundations of the Nile; for, as other streams when they overflow, wash away and exhaust the vivific strength and moisture of the soil, or in the nervous words of Seneca, "eviscerate" it, the Nile does not devour or brush off any of the useful material, but, on the contrary, fattens and enriches it in such a manner as sufficiently compensates for what the proceeding harvest has impaired.

One of the greatest instances of the useful application of industry ever presented by man to an admiring posterity, is to be viewed in the lake Mœris, which was considered the noblest of all the wonderful works of the kings of Egypt. Its laudible object being to advance the cause of Agriculture, renders it infinitely better worthy the attention of the friend of humanity than the enormous Pyramids, styled by Pliny* "the idle and foolish ostentation of the wealth of the Egyptian kings."

As the too general flow or ebb of the waters of the Nile proved equally injurious to the land inundated by it, King Mœris, to remedy this inconvenience, and to correct the irregularities of the flood, called art to the assistance of nature, and caused the lake to be dug, which was afterwards distinguished by the name of the monarch. Authors differ as to the extent of this artificial piece of water. Herodotus, Diodorus Siculus, and Pliny, gravely assert, that it was not less than 150 or 180 miles in circumferance;

* Lib. 36. cap. 12.

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but, even taking the more moderate account of Pomponius Mela, it appears to have been about 20 miles round. The communication with the river was kept up by a canal, 4 leagues in length, and 50 feet in width. Great sluices opened or shut the canal or lake, when occasion required; and when the river rose too high, and its rising was likely to be attended with fatal consequences, its waters were admitted to the lake. On the other hand, when the inundation was insufficient and threatened a scarcity, water was furnished by the lake being permitted to empty itself by numerous canals.

Strabo says that when Petronius was Governor of Egypt, it was calculated that when the Nile rose 12 cubits, a great plenty ensued; when it rose only to 8, the dearth was scarcely felt, as the waters of the lake Mœris supplied the deficiency of the river.

Another work of extensive importance to Agriculture was executed by the Emperor Galerius. He discharged the superfluous waters of the lake Pelso into the Danube, and, by cutting down immense forests, opened a large and fertile district to his Pannonian subjects.

The learned and critical Gibbon, throws some doubt on the account of this work, given by Aurelius Victor,* in consequence of what he considers to be a geographical inaccuracy, and he suspects that lake Pelso has been confounded with the Volocean marshes, now called lake Sabaton, which were situated in the province of Valeria,—a name which the wife of Valerius gave to the drained country lying between the Drave and the Danube; although he does not deny the fact of such an undertaking.

It is also worthy of recollection, that the useful and virtuous Emperor Probus lost his life by the hands of his soldiers, who he imprudently urged with great severity to complete the unwholesome labour of draining in the midst of summer the marshes of Sirmium, in Pannonia; impatient of fatigue, they grasped their arms and broke out into a furious mutiny.†

The blessings of an abundant harvest and plentiful increase, are frequently represented in Holy Writ, as the reward of the righteous; but we are not to suppose that these advantages occurred to them without having been earned by industry and laborious exertion; and, indeed, in some parts of the east, which we know to have been extremely populous in ancient times, it must have required no ordinary pains and attention to make the soil productive.

For Clarke, in his travels, says, that the country in the vicinity of Jerusalem, is rocky, and apparently sterile, as Strabo repre-

* Cap. 40. † A D. 282.

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sents it, and is now in general perfectly barren. However, the sides of the most unproductive mountains in that part of Judea had formerly been rendered fertile by being divided into terraces, described by General Stratton as resembling the gradus or rows in a theatre; on which soil had been accumulated with astonishing labour: and, as in Judea, the influence of the sun is often severely felt, as in this country, (being in about a corresponding latitude with the northern portion of the colony of New South Wales), the landscape, according to Burckhardt, presents almost always a dusty appearance, and the grass is parched and withered up; but there are still to be seen in many parts of Syria, and within the limits of ancient Judea, the remains of large cisterns or tanks, some hewn out of the solid rock, in which the rain water was collected; and traces of canals are still to be observed, by which those waters were distributed on the fields.

Such labours necessarily created a prodgious fertility under an ardent sun, where moisture was the only requisite to revive the vegetable world; and by the means of irrigation, vegetation was perpetually maintained, and made to produce an uninterrupted succession of flowers and fruits.

The value of irrigation was also fully appreciated in Persia and upper India, where canals of great length constructed by former princes, conveyed water in abundance to provinces before uncultivated in consequence of the aridity of the soil. It furthermore proved a source of revenue to the Princes, who sold the water to the inhabitants of the district through which the canal passed; flood gates, at certain stations, admitted a supply to private aqueducts, which again fed smaller streams, the contents of which dispersed themselves over the thirsty fields.

That similar results might be arrived at in many parts of this country with similar success, I see no reason to doubt; and I feel convinced no tax would be more cheerfully paid by an industrious population, than one for which they received so valuable an equivalent as that which fertilized their soil, rendered them independent of an unpropitious season, and enabled them to rely with certainty on a profitable return for their outlay. And, if Louis the XIV. of France, in the magnificence of his luxury, could raise, by hydraulic machinery, of enormous power, the waters from the bed of the Seine, to a height which enabled them to flow on a stupendous aqueduct, to supply his jets d'eaux at Versailles, and thereby afford us subject for astonishment and admiration; how much more noble and worthy of applause should we not consider a similar undertaking; which, instead of creating in our

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minds a regret that the perfection of art had been employed in a purpose so little to the benefit of society, would call forth emotions of the most gratifying and exalting description in beholding art directed to its legitimate end—the amelioration of the condition of man, and the victory of science over nature!

Amongst the Ancients, Agriculture was held in high estimation; and the noblest Poets did not consider rural and pastoral affairs beneath the dignity of the Muse.

The Elusinian mysteries, the most sacred and solemn of Pagan religious festivals, were celebrated in honour of Ceres, the goddess of corn and harvests, who was supposed to have instructed Triptolemus, king of Attica, in the Art of Agriculture.

The Cerealia, or Ludi Cerealis, which corresponded with the Thesmophoria of the Greeks, were held annually at Rome, in the month of April; as were also the Isia, in honour of the Egyptian goddess, Isis. They lasted nine days; and those who participated in the ceremonies, carried about vessels filled with wheat and barley, as to Isis was attributed the having imparted to mankind a knowledge of the value and mode of cultivating those grains: and although, in consequence of the licentious conduct of the people they were abolished by the Senate A.U.C. 696, they were introduced anew, by the Emperor Commodus.

Triptolemus, of whom I have just made mention, promulgated several laws, to regulate and promote Agriculture; they are enumerated by Porphyrius and Hieronymus, one of them displaying the humane character of the Legislator impressively declares

"Hurt no living animal."

In the politics of Aristotle, several of the laws of Solon relating to property and rural affairs are preserved; by one of them "Men are not to be permitted to purchase as much land as they desire, lest they become too great and powerful." Another "forbids the slaughter of oxen, which labour at the plough, or of lambs, within two years of age." This was to encourage the propagation of those animals; and for their protection, "a reward of five drachmas was offered for the head of a wolf."

By a law, ascribed to Pisistratus, any man is permitted to bring a criminal accusation against another for idleness; which shows the antiquity of the Vagrant Act: and by another, an action of Libel or Slander might be brought against any person who disparaged or ridiculed any man or woman for being of a trade.

From a Drama of Aristophanes, "The Frogs," it appears that great encouragement was given at Athens to industrious artizans; for it is mentioned that—

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"He who by his profession or calling gets best repute, and is reckoned most ingenious in his trade, shall have his diet in the Prytaneum, and be honoured with the highest seat."

To protect the Agricultural interest, a corn law, alluded to by Demosthenes* forbid the sending of money out of the country to buy corn, unless the introduction of it were permitted by a Decree of the people; and the illegal importation of corn subjected the offender to a trial before the officers of the Custom House,—the process being similar to what is styled in our legal phraseology, a "qui tam" action, as the informer claimed half the corn. Olives were exported; but it was forbidden, except to the Victors at the Panathenean games, to send all other fruits out of Attica; and the term Sycophant, which, in the English language, bears a very different meaning, signified in the original, one who informed against those who exported figs.†

Hesiod, who flourished about B.C. 1000, the most ancient Greek author, whose writings are now extant, has afforded in his "Works and Days," written about the age of King Solomon, instructions to the husbandman, shepherd, and herdsman, and also rules for the management of the vine and the olive, illustrating them with rural descriptions, and concluding with various religious precepts.

The divine Homer himself has frequently introduced into his Epics familiar representations connected with pastoral and agricultural life, (some indeed of a very homely nature) and in particular when describing the armour fabricated by Vulcan for Achilles, he has taken occasion to mention, as delineated on the shield, the several operations of husbandry in succession—ploughing, sowing, reaping, the vintage, and tending the flocks and herds at large in the pasturage.

In the early ages of the Roman Republic, the Senators, and those who filled the highest offices in the State, on leaving Rome, laid aside the dignity which accompanied their elevated station, and applied themselves to the cultivation of their farms, actually assisting their servants in performing the ordinary duties of husbandmen. And we are all familiar with the name of Cincinnatus, Dentatus, Fabricius, and Regulus, men taken from the humblest rural labors, on their little farms, of from four to seven acres, to lead armies, assume the office of Dictator, make war, conclude treaties, and tranquilise the disturbances created by turbulent and seditious citizens.

In the foremost rank the of Roman authors, we find Virgil,

* In Locritum. † From Sukon Faino.

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who, in his four books of Georgics, has entered very minutely into matters connected with Agriculture; and while he charms the ear with the melody of his numbers, and delights the mind with the richness of his poetic imagery, he enumerates the most usual indications of a fruitful and productive soil and the reverse; the crops best adapted to each, with the treatment of them,—points out the appropriate season for the different rural tasks; and lays down rules, some of which as applicable to the climate of Italy, have not since been improved on.

That the Art of Agriculture was held in high estimation by the Romans is evident, from the number of writers on the subject; among them were Cato, Varro, Cicero, Columella, Virgil I have already named, Palladius and Pliny, men distinguished for eloquence and learning; and we are told that the works of Mago, a Carthaginian writer on Agriculture (who produced a Treatise, in 28 books), were preserved by Scipio at the taking of Carthage, and by him presented to the Roman Senate, by whose orders they were translated into Latin, by Silanus, and several other persons skilled in the Punic language; (as they had been previously translated into Greek, by Cassius Dionysius of Attica) and it is said that the Romans consulted them with greater avidity than they did the Sibylline Verses.*

* The history of the Sibylline Books is known; their loss when the Capitol was burned, in the time of Sylla, is also known. They were replaced by Sibylline Verses, collected from various Temples in Greece, which commanded infinite respect until destroyed by Stilicho, about A. D. 390. This act of barbarism is commemorated in the spirited lines of Rutilius, the poet of Gaul.

Quo magis est facinus diri Stilichonis acerbum,
Proditor arcani qui fuit imperii.
Romano generi dum nititur esse superstes,
Crudelis summis miscuit ima furor.
Dumque timet, quic quid se fecerat ipse timeri,
Immisit Latiæ barbarâ tela neci.
Visceribus nudis armatum condidit hostem,
Illatæ cladis liberiore dolo.
Ipsa satellitibus pellitis Roma patebat,
Et Captiva prius, quam caperetur, erat.
Nec tantum Geticis grassatus proditor armis,
Ante Sibyllinæ fata cremavit opis.
Odimus Althæam consumti funere torris
Niseum crinem flere putantur aves:
At Stilicho Æterni fatalia pignora regni
Et plenas voluit precipitare colus.

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But another circumstance indicates this, and is in itself not a little amusing, which is, that several of the most illustrious families which Rome produced, derived their names from the founders of them having applied themselves to the breeding and increase of different kinds of animals, or from there having introduced into Italy or cultivated with success various plants and vegetables. Thus, *Plutarch informs us that the Suilii, the Bubulci, the Caprarii, and the Porcii earned their names, either from the peculiar skill with which they managed the Sow, the Ox, the Goat, and the Pig, or from the numbers of them they possessed: Other authors inform us that the Pisones were so called from Pisum a pea, the Fabii from Faba a bean, the Lentuli from Lens, a lentil introduced from Egypt.† Cincinnatus received the name of Serranus, because the Ambassadors found him employed in sowing his land when they brought him the intelligence of his having been invested by the Senate with the office of Dictator.

Cicero, the renowned orator, received the cognomen from Cicer a vetch, as some say, from the successful culture by him of that plant, though others affirm it was from his having a wart like a vetch upon his chin, as the 8th Ptolomy of Egypt was called Lathyrus from a wart, resembling the seed of the Lathyrus, a kind of Egyptian pulse, upon his nose. Agricola, a name made celebrated by the biography of Tacitus, means a husbandman. And even the derivation of words signifying riches is expressive of the fact that the first ideas of wealth were deduced from the abundance of pastoral and agricultural possessions. Thus "locuples" rich, comes from "loci" vel. "agri plenus" "pecuniosus" from "pecorum copia," "pecunia" from "pecus," the coin being originally stamped with the impression of a sheep.

It may be incidentally remarked, that it was contrary to the

Omnia Tartarei cessent tormenta Neronis,
Consumat Stygias tristior umbra faces.
Hic immortalem, mortalem perculit ille;
Hic mundi matrem perculit, ille suam.

Lines which outweigh all the adulation of Claudian.

* Life of Publicola.

† Accipe Niliacam Pelusia munera LENTEM
Vilior est alica carior illa faba.
Mart. Xenia 5.

‡ Omnes enim Veterum divitiæ in animalibus consistebant.
Coke on Lit. 207. b.

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Roman laws for a private person to cause his name or figure to be inscribed on any public monument, or on the coin of the Commonwealth,—so Cicero, when Ædile ordered that instead of his name in full, the words Marcus Tullius, with the representation of a *vetch* should be placed on a public building, erected during the time he held office; as Julius Cæsar, in the same spirit, directed that the figure of an elephant should be placed on the reverse of the public money, which he artificially contrived as the word Cæsar, signifies an elephant in the Punic tongue.

A similar evasion is related of the two Grecian Architects, Batrachus and Saurus, who erected a temple gratuitously, with the hope of being permitted to enjoy the honor of perpetuating their names by having them inscribed upon the building. This privilege being denied to them, they attached to several parts of the work, the figures of a frog and a lizard; the words BATRAKOS and SAURA, signifying those reptiles, corresponded in an equivocal manner with the names of the designers.

It is also supposed that a similar object was in the view of the sculptor, who made the Equestrian Statue of Marcus Aurelian in which the forelock of the horse represented at a distance the shape of an owl, the bird sacred to Minerva and the tutelary Divinity of Athens, to indicate that the artist was an Athenian.

In the early ages of the commonwealth, the relations of landlord and tenant were not understood; but as wealth increased, opulent proprietors let a portion of their land to tenants; and the first leases were granted for a Lustrum, or period of five years.

While the laws restricted the possession of land, and while the citizens themselves cultivated their own farms, the Republic could boast of and command a race of brave and hardy warriors; but when her military operations were conducted on the grand scale which required several armies in the field at once, in different countries, Rome was forced to delegate the duties of husbandmen to slaves, and to depend for a supply both of provision and men upon the provinces of Sicily, Spain, Gaul, Africa, and Egypt.

As the fortunate termination of successive wars annexed different foreign countries to the Republic, those lovers of Agriculture, immediately on the discovery of any useful trees, plants, or vegetables, took steps to introduce them to Italy, and to propogate them with due attention; and as they found them by degrees acclimatized, and rendered sufficiently hardy to bear the higher latitudes, they generously distributed them amongst the northern provinces. It is thus that most of the flowers, herbs, and fruits now common in Great Britain are primarily of foreign extraction; their origin is, in many instances, betrayed by their

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names. The apple was a native of Italy, but when the Romans had tasted the rich flavor of the apricot, peach, nectarine, citron, orange, and pomegranate, they contented themselves by applying to all these new fruits, the common denomination of "apple," discriminating them by superadding the additional epithet of their country, or some peculiar distinctive characteristic; as malum Armeniacum, Citreum, Persicum, Medicum, Assyrium, Aurea, Punica. The quince was called Pyrus Cydonia, from Cydonia, a town in Crete; the cherry or cerasus, from Cerasus, a city of Pontus, whence it was transplanted into Italy by Lucullus, B.C. about 73, and found its way into Britain about 150 years after. The damson, or more properly the damascene plum, was brought from the neighbourhood of Damascus; currants came from Corinth, still called in French "*raisins de Corinthe*," and the lucerne or clover retained the appellation of medica, from a district of Media, whence it was conveyed into Greece, according to Pliny, during the wars of Darius, and thence into Italy.

Crambe or colewort, so deadly a rechaufée, according to the Greek proverb* and the authority of Juvenal, † may be traced in the Koroumb, the kidney-bean Faselus of Aristophanes ‡ Faselus of Virgil in the "Besilleh;" the caper caparis of Theophrastus capparis of Pliny in the "Kabbar;" and the arum § colocassia of Virgil Martial Columella and Pliny in the "Kolgos," of modern Egypt.

Flax also was introduced from that country, and cultivated with success in Gaul; and the different artificial grasses became familiar to the farmers of Italy and the provinces, which assured supply of wholesome and plentiful fodder for the cattle during the winter, multiplied the flocks and herds, which, in their turn, contributed to enrich the soil.

* Dis crambe thanatos.

† Occidit miseros crambe repetita magistros.
Sat. VII. l. 154.

‡ Sivero viciamque seres vilemque FASELUM.
Nec Pelusiacæ curam aspernabere lentis.
Virg. Georg. I. L. 227.

§ At-tibi prima puer nullo munuscula cultu,
Errantes hederas passim cum baccare tellus.
Mixtaque ridenti COLOCASIA fundet acantho.
Virg. Bucol. IV. l. 18.
Niliacum ridebis olus lanasque sequaces,
Improba cum morsu fila manuque trahes.
Mart. Xenia 54.

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It may finally be observed, that the advanced state of Agriculture, in the latter period of the Roman History, may be inferred from the dense population of the capital and provincial cities, and from the circumstance that famines, so frequently experienced by the infant Republic, were of rare occurrence; as the lamentable effects of deficient harvests were guarded against by experience, which dictated a judicious system of storing provisions in public granaries,—an instance of prudent foresight, well worthy of the attention of our rulers here, where the demands of a progressively increasing population exceed the supply raised for its support within the country.

In pursuing this hasty sketch of the History of Agriculture, I now leave the middle regions of the south, and proceed with the Romans into Britain. Before their arrival in that island, though some of its inhabitants lived chiefly by hunting, others had, long before that period, understood the management of flocks and herds of domestic animals.

Cæsar, in his Commentaries, says that "the island of Britain abounded in flocks and herds;* and the greatest number of the inhabitants never till their lands, but live on flesh and milk, religious prejudice caused them to abstain from eating hares, fowl, or geese;" and Carte, in his History, says that "many of the antient British nations are by some supposed to have derived their names from the particular kinds of cattle they chiefly tended." However, these antient British herdsmen seem to have been ignorant of some of the most valuable portion of their craft, until they were instructed by the Romans; for we have no reason to believe that they had any knowledge of the art of the emasculation of cattle for the purpose of meliorating their flesh; and it is supposed, by one of our most learned antiquaries, that Scribonius, physician to the Emperor Claudian, was the first who imparted to them this knowledge; and we are informed by Strabo, that they were unacquainted with the art of making cheese: although the Germans knew its use, acording to Cæsar.† If the testimony of an antient writer, Geoffry of Monmouth, can be relied on, the Art of Agriculture must have made greater progress than is admitted by the Roman Historians; for he says, that by one of

*Pecoris magnus numerus. . . . . Leporem et gallinum et anseram gustare, fas non putant.—Cæs. Com., Lib. v. cap. xii. Interiores plerique frumenta non serunt, sed lacte et carne vivunt. Cap. xiii.

† Agriculturæ non student, major que pars victus eorum in lacte et Càsco et carneconsistit. Com., lib. vi., cap. xxi.

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the laws of *Dunwallo* Molmutius*, who flourished B.C. 500, "the ploughs of the husbandman, and the temples of the gods, should be sanctuaries for such as fled to them." The antient British husbandmen were not, however, destitute of knowledge of the value of manures of different kinds, and even employed some unknown to the Romans themselves, amongst which Pliny enumerates "marl," which he calls "fat clay or earth;" and he mentions several descriptions,† of which he considers the white kinds the fattest and most beneficial. To obtain this, he says, they must sink shafts an hundred feet deep, and its effects are said to continue for eighty years. Lime, also, he affirms was occasionally used.

The agricultural implements of our forefathers, at this period, must have been of course both limited in number and of rude construction; but there is some reason to believe that the system of reaping corn with scythes, attached to the wheels of a cart, driven by one or more horses, (on a principle similar to that by which they mowed down their enemies in the field with their war chariots), was in vogue amongst them.

The politic Romans having subdued, by degrees, the several British States, endeavored, by various means, to bring their new subjects to cultivate the lands, in order that their conquests might thereby be rendered more valuable. They imposed on the vanquished, a tribute of a certain portion of corn; and by their power and example so effectually reconciled the Britons to the arts of cultivation, that, in a short time, the island became one of the most plentiful provinces of the empire,—a proof of which is afforded by the historian of the Emperor Julian, who informs us that ‡"that Emperor built a fleet of 800 ships upon the Rhine, larger than the common barks, and sent them to Britain to bring

*Geoffry of Monmouth mentions Dunwallo Molmutius, he was as he says, son of Cloten, King of Cornwal.—Lib. II. cap. 17.

And Shakspeare alludes to him, evidently quoting from that source:

> We do say then to Cæsar
> Our ancestor was that Mulmutius which
> *Ordain'd our laws*———Mulmutius
> Who was the first of Britain who did put
> His brows within a golden crown, and called
> Himself a king.
>
> Cymbeline, Act III. Sc. I.

† Est enim (Leucargillon) alba, rufa, columbina, argillacea, tofacea, arenacea. Natura duplex; aspera, aut pinguis.—Plin. Nat. Hist., lib. xvii. cap. 7 8.

‡ Ammianus Marcellinus, Circ. A. D. 360.

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corn from thence to supply the nations there suffering from famine, caused by an incursion of barbarians."

Horticulture was also attended to; and the Emperor Probus embraced a great and beneficial plan of replenishing the exhausted peasantry, by introducing colonies of captives, on whom he bestowed land, cattle, and instruments of husbandry;* and it is asserted, that he transported a considerable body of Vandals into Britain, and located them, it is supposed, in Cambridgeshire. He also revoked the imperial prohibition of Domitian, and granted a general permission of planting vines to the Gauls, Pannonians, and Britons; and such advancement did the antient Britons make in the rural arts, for making the earth yield her most precious gifts in the greatest abundance, for the support and comfort of human life, that we have reason to suppose that Provincial Britain was better cultivated, had better means of communication;† the people were more comfortably housed; and that it was in all respects a more plentiful and agreeable country, while under the Roman sway, than it was for many centuries after their departure; at which time, Gibbon informs us, there were in the island ninety-two considerable towns, amongst which, thirty-three cities were distinguished above the rest, by their superior privileges and

* Camden's Brit.—Intro. p. 136.

† In antient times, the principal Highways in England were Watling-street, Ikeneild-street, Rykenield-street, Erming-street, Akeman-street, Upper Saltwey, Lower Saltwey, and Fosse; of which, say the Laws of Edward the Confessor, two extend across the kingdom, two run from one end thereof unto the other.

The following curious lines from Robert of Gloucester mention four of the roads. The author is mistaken in certain particulars, if we credit other topographers.

Faire weys many on ther ben in Englonde,
But fourmost of all ther ben I understonde,
That thrugh an old king were made ere this
As men schal in this boke after hear tell I wis.
From the south into the north taketh Ermingestrete;
From the east unto the west goeth Ikeneldstrete.
From southest to northwest that is sum del grete
From Dover unto Chester goeth Watlingstrete.
The forth of these is most of all that tilleth from Toteneys
From one end of Cornwall anone to Cateneys:
From the southwest to northest unto Englondes end,
Fosse men calleth this voix that by many town doth wend.

Richard of Cirencester enumerates eighteen Roman "Iters" or roads.

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importance; possessing a legal Corporation, for the purpose of regulating their domestic policy, with the powers of Municipal government distributed amongst annual magistrates, a select Senate, and the assembly of the people.

In the era following that of Roman authority, we find a sad declension in the practice of the Art of Agriculture, owing chiefly to the incursions of Scots, Picts, Saxons, and subsequently of the Danes, who both interrupted the husbandman in the exercise of his labours, and also, either carried away or destroyed the fruits of them.

The long wars which followed the arrival of the Saxons, and which eventually expelled the Britons from their richest districts, caused them to forget much of their skill; and amidst the mountains of Wales and the fastnesses of Cornwall, they devoted themselves rather to pasturage than to agriculture. This is evident from the laws promulgated in that time, embodied in a code called "Leges Wallicæ," which appointed that fines inflicted, and even the "Weregild," or compensation for men's lives should be paid in cattle; and the great anxiety evinced by these early legislators, for the preservation of the fruits of the earth, appears from there having been not fewer than eighty-six enactments respecting them.

The Anglo Saxons, a race of proud and restless warriors, considered the servile offices of Agriculture too ignoble for them; and when they could no longer procure provisions at the point of the sword, they deputed the duties of guiding the plough and handling the spade to their women and slaves.

A melancholy proof of the neglected state of cultivation is afforded by the frequent and deplorable famines which visited England from time to time, and swept off vast numbers of its inhabitants: In the year A. D. 1043, in particular, so great a scarcity prevailed, that a quarter of wheat sold for sixty Saxon pence, containing as much silver as fifteen shillings, equivalent to about 8*l.* sterling of our money.

It was by the Monks (to whom we are also indebted for the preservation of literature and the arts and sciences through the dreary period of the dark ages), that any traces of the Horticulture of antiquity were preserved in Britain. They planted orchards, grafted fruit-trees, and cultivated herbs and vegetables, in gardens attached to their monasteries, which they tilled with their own hands.

In fact, the protection and encouragement of all concerned in Agriculture, were objects of peculiar attention to the Church; for the 26th Canon of the General Council of Lateran, held A. D. 1179,

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decrees that "All presbyters, clerks, monks, converts, pilgrims and peasants, when engaged in the labors of husbandry, together with the cattle in their plough, and the seed, which they carry into the field, shall enjoy perfect security; and, that all who molest or interrupt them, if they do not desist when they have been admonished, shall be excommunicated." Before this we find that haughty prelate, Thomas a'Beckett, condescending to go with his clergy in a body to assist his neighbours in saving their hay and reaping their corn.

There is no question but that the conquest of England by the Normans, contributed largely to the improvement of the Art of Agriculture; for, by this event, many thousands of husbandmen were poured into the country, from Flanders, France, and Normandy, who settled on the 60,000 Knight's Fees, into which William the I. divided the the kingdom; and they immediately applied themselves to the same methods of cultivation they had practised at home: and thus a second time was England indebted to her continental neighbours for the introduction or improvement of this important art.

The writers of this period and of the succeeding century, incidently mention the various operations of ploughing, sowing, harrowing, reaping, thrashing, winnowing, cross-ploughing; and summer fallowing was a common occurrence amongst the English farmers, as may be collected from the writings of Gerald Barry, better known as Giraldus Cambrensis, who accompanied Prince John to Ireland, A. D. 1184.

William of Malmsbury, who flourished in the 12th century, states that England abounded with gardens, orchards, and vineyards, planted by the Normans; and says that in the Vale of Gloucestershire wine was made, very little inferior in flavor to the wines of France. In the following century, a very equitable regulation was made, as to the collection of the Royal revenue. It ordained "that no cattle necessary for the cultivation of the land should be destrained for the kings dues, or for any other kind of debt." Formerly, according to the Black-Book of the Exchequer, the kings of England received neither gold nor silver from their tenants, but only service or provisions for the household, and officers appointed to manage the kings land; which custom was even continued during the whole of the reign of William I.

This is borne out by the derivation of the word farm, as given us by Mr. Justice Blackstone.* It is deduced, he says, from the

* Bl. Com. vol. ii. p. 318.

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Saxon "Feorme," which signifies "provisions," and it came to be used instead of *rent* or *render*, because antiently the greatest part of rents were reserved in provisions, in corn, in poultry and the like, till the use of money became more frequent; so that a farmer "*firmarius*," was one who held his land on payment of a "rent" or "feorme," though at present by a gradual departure from the original sense, the word "farm" is brought to signify the very estate or lands so held upon farm or rent.

It is nevertheless a subject for melancholy reflection, that, though the foregoing alteration is adduced as an instance of the increased attention paid to Agriculture, the rights of the subject should have been so little understood at this period; for when Henry III. was declared of age, and on that occasion ratified the great charter which had been wrung from his father at Runnymead, no other notice is taken of that useful class of society, the husbandmen than, that "guardians are prohibited from committing destruction and waste of the *men* and goods of their wards."

Nothwithstanding the progressive improvements in Agriculture, some very severe famines were felt. They were partly owing to the dreadful devastation of war; and some are attributed to prodigious rains and floods, against which no skill or industry can guard. One which occured in A.D. 1257, is ascribed to Richard, Earl of Cornwall, having drained (if we may credit some antient authors), no less a sum than 700,000 marks out of England, in order to bribe the German Electors, to elevate him to the imperial throne.

An anonymous work called Fleta, composed, it is imagined, by a lawyer confined in Fleet Prison, (whence the name) contains, amongst other topics, complete instructions in Agriculture and Horticulture, and sets forth the duties of a steward or bailiff of a manor.*

Between the thirteenth and fourteenth centuries, the circumstances of the country, and the manners of its inhabitants, were

*A. D. 1215

That the accounts of English farmers should have been kept in Latin in the 13th Century seems strange; and such Latin! but a specimen may amuse.

Pro una cart sadel uno colero
cum uno pairi-tractuum emptis - - XIV. D.
Et pro factura de drawgere. - - - III. ,,
Et pro uno donge cart empto - - - XIV. ,,
Et pro sarratione et dolatione-unius cart
body - - - - - - - - - - - VI. ,,

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unfavorable to the Art of Agriculture, and it will be found to have made but little progress.

War almost constantly diverted the attention of the people, and particularly the nobility, from the improvement of their lands. A taste for this art was even considered dishonorable and plebeian; and King Edward II. was bitterly reproached, as well as much despised, for his attachment to it and neglect of military exercises.

This again gave rise, as may be naturally expected, to several destructive famines; in one of which it is computed by Mathew Paris, that not fewer than 15,000 people perished, in London alone; and the making of malt and brewing beer, were prohibited by Royal proclamation. It was impossible, however, to expect that Agriculture could flourish, when those who cultivated the soil where hardly raised above the condition of beasts of the field; and who labored, not so much for themselves, as for their imperious masters, and were liable at any moment to be called from their rural operations into the field of battle by the Royal mandate, or the requisition of their own arbitrary lords.

Such multitudes of this order of men actually fell in battle, or were destroyed by the accidents and fatigues of war, that hands were wanting to carry on the necessary labors. This scarcity caused loud complaints, and drew forth several statutes* to reduce and fix the rate of wages, to compel men to become laborers, and to restrain them from following other occupations.

These rigid enactments, which trenched so violently on natural liberty, were enforced by severe penalties,—a proof that the evil they were intended to remedy was seriously felt. The want of laborers also induced many of the great landholders to enclose their arable lands, and convert them into pasture, which rendered them extremely unpopular; and the value of English wool declared itself about this time. Manufactures being more advanced on the Continent of Europe than in Britain, the English made a profitable exchange of a commodity they were unable to turn to account, for corn, and other desirable articles. James I. of Scotland, who had been detained a prisoner in England for 18 years and was for the age in which he lived an accomplished and enlightened prince, seems to have taken some pains on his release to improve the condition of his subjects. The state of Agriculture in his kingdom may be inferred from one of the Acts of the Scottish Legislature of this time. It is ordained "That ilk man shall sow at the least ane firlot of quheit (wheat), half a firlot of peies,

* 7 Hen. IV. c. 17. 4 Hen. V. c. 4. 23 Hen. VI. c. 14. 23 Hen. VI. c. 12. Also, 5 Eliz. c. 4.

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and 40 beans, under a paine of Xs., to the Barronne of the land he dwells in."

From the time of the accession of the Tudor family to the English throne, a long period of comparative tranquillity commenced; during this season, the nation, not exhausted by foreign wars, nor much disquieted by intestine factions, had leisure afforded to apply itself to the cultivation of the Arts and Sciences, which had been for so long a time neglected. The first great evil which presented itself to that sagacious monarch, Henry VII., was the decay of Agriculture, which called forth an act of his 4th Parliament to regulate and encourage it; and I may be permitted to read the preamble to give an idea of the importance attached to the subject.*

"The King, our Soverign Lord, considereth how daily within this Realm his coin is traitorously counterfeited, murders, robberies, felonies, been grieviously committed and done and also unlawful reteinors, idleness, unlawful plays, extorsions, misdemeanings of sheriffs, escheators, and many other enormities and unlawful demeanings daily grown more and more within this Realm; to the great displeasure of God, hurt and impoverishing of his subjects, and to the subversion of the policy and good government of this his Realm; for, by these said enormities and mischiefs, his peace is broken, his subjects troubled, inquieted and impoverished; *the husbandry of this land decayed*, whereby the Church of England is upholden, the service of God continued, every man thereby hath his sustenance, every inheritor his rent for his land."

An act of his successor expatiates in the preamble in a most doleful strain; on the complicated miseries which the increase of sheep and extension of pasture had inflicted on the poor, and the flocks of individuals which had sometimes exceeded 20,000 in number, were reduced to 2000, the number in the hundred being fixed by sec 12 at vi. score.† Sir Thomas More, in the spirit of the preamble of this act, exclaims "That a sheep is become in England a more ravenous beast than a lion or a wolf, and could devour whole villages, cities, and provinces."

As an inducement to the practice of the Art, a learned judge, Fitz Herbert, addressed a treatise thereon to Henry VIII, and recommended the system of granting leases for three lives, in order to encourage the yeomanry. Thomas Tusser and Barnaby Googe, also wrote on the subject. The Georgics of the former, says Andrews, may be read without disgust by those who have studied Hesiod or Virgil.

* 4 Hen. VII. c. 12. Sec. 2. † 25 Hen. VIII c. 13.

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Horticulture, which had been much neglected previously, now claimed a greater degree of attention, and gardens were enriched by importations from the Continent; but their progress was slow, if we believe Aikin, who informs us that Queen Catherine, first wife of Henry VIII., being on one occasion particularly anxious for a salad, was, after a fruitless search had been made for one all through England, compelled to send for one to Flanders.

Dr. Henry is of opinion that it was not until the reign of Queen Elizabeth that pleasure grounds were much attended to,—the orchard had been heretofore the retreat for recreation; and columns, pyramids of marble, statues, and fountains with water-works, were frequently to be seen, near the mansions of the nobility.

About this period also the breeding of horses seemed to have first attracted the regard of the Legislature; and divers statutes regulate the height of the males, make the transporting of horses out of the realm, particularly to Scotland, an offence subject to no less a penalty than 40*l.*, and take from horsestealers the benefit of clergy.* But it was found necessary in the reign of Queen Elizabeth to lower the standard of horses in the counties of Cambridge, Huntington, Northampton, Lincoln, Norfolk, and Suffolk, on account (as the statute recites) "of the rottenness, unfirmness, moisture, and waterishness of the fen grounds, &c., being never able, nor yet are, to breed, bear, or bring forth horses of such bigness and high stature as by statute are expressed.†"

Although the number of horses in England must have been great, if we credit the assertion that the quota demanded by the Queen in her progress through the kingdom, amounted to 30,000: sheep and cattle, do not seem to have been equally plentiful; for a most sanguinary act was passed in the 8th of Eliz. [cap. iii.,] prohibiting the exportation of rams, lambs, or sheep alive; by the second section of which it was enacted, "that every such offender should suffer imprisonment for one year without bail and mainprise; and at the years end, shall, in some open market town, in the fulness of the market, on the market day, have his left hand cut off, and to be nailed up in the openest place of such market;" the second offence being made felony, punishable with death.

An act had been previously passed, V. Eliz. cap. v., "An act

* 11 Hen. VII. c. 13. 27 Hen. VIII. c. 6. 32 Hen. VIII. c. 13. 8 Eliz. c. 8. 31 Eliz. c. 12.
Vide also 13 Geo. II c. 19. 18 Geo. II. c. 34.

† 8 Eliz. c. 8.

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touching politic constitutions, for the maintenance of the navy,' by Sec. XIV., of which it was ordained that "no person should eat meat on Wednesdays, on forfeiture of three pounds, or three months close imprisonment, unless in case of sickness or special license, neither of which was to extend to beef at any time, or to veal from the feast of St. Michael the Archangel to the first day of May;" and great pains were taken to prove that it was a political and not a religious measure.

The discovery of the New World, and of the passage to the East Indies, by the Cape of Good Hope, at the close of the fifteenth century, afforded opportunities of extended travel and observation; which, together with the additional lights presented by the advancement of scientific knowledge, opened new and bright prospects to the people of England.

The vast addition which the general stock of aliment gained by the introduction of the potatoe in this age, is too well known to require comment. Captain Hawkins is said to have brought this excellent root from Santa Fe, in New Spain; and Sir Walter Raleigh soon after planted it on his estate in Ireland, near Youghal. It grew luxuriantly, but, on eating the apple which it produced, which is nauseous and unwholesome, he had well nigh consigned the whole crop to destruction. Fortunately the spade discovered the true esculent, and the root became in a short time a favorite eatable, though we may suppose it was at first confined to the tables of the great; for Gerrade speaks of it as "a food, and also a mete for pleasure, being either roasted in the embers or boiled or eaten with oile, vinagar, and pepper, or dressed some other way by the hands of a skilful cooke."

The gradual introduction of the mechanical arts and manufactures, opened an internal source of opulence; and as wealth now began to circulate through the kingdom, instead of being heretofore drained out of it, the condition of the people was materially improved.

In the succeeding reign of James I., the Art of Agriculture made considerable progress; and that monarch passionately addicted to hunting and rural pursuits, extended to it his Royal countenance.

The annals of this century present to us a memorable and striking example of the fallacy of the doctrine, which supposes wealth to consist of hoards of coin or bullion, and which demonstrates that the true sources of the wealth of nations are "Agriculture, manufactures, and commerce."

The quantity of gold and silver found in the New World, enticed the inhabitants of old Spain, neglecting their useful pur-

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suits at home, to flock thither in such vast numbers, with the hope of accumulating adventitious wealth, that the old country gradually lost many of its most valuable inhabitants, which added to the impolitic expulsion of nearly 1,000,000 citizens, (the Moors) led to a fatal discouragement of the useful arts.

Although (as is computed) the precious metals, to the amount in value of 150,000,000*l.* was poured into Spain from America; and notwithstanding the tardy offer of the Duke of Lerma, Prime Minister of Philip III., of a title of nobilty to those of the gentry who would devote their skill to the promotion and improvement of Agriculture, and a promise of exemption from military service to all husbandmen; her retrograde career commenced. From inability to recruit her armies, she fell from the position she had held in the scale of European nations, and was compelled to contract her operations; her flourishing manufactures fell into decay; her fleets, which had been the terror of Europe, were ruined; her extensive foreign commerce was lost; her trade between different parts of her own dominions was interrupted; and even Agriculture, the primary object of industry in every prosperous state, and which in other nations was just emerging from the degraded condition in which it had long been buried, was neglected; and Spain one of the most fertile countries of Europe, hardly raised what was sufficient for the support of her own diminished population.

The troubles of the civil wars of England, during the reign of Charles I., gave a brief check to its progress; but it was during the period of the Commonwealth, when the minds of men set themselves attentively to consider the requisites of true liberty, that the plan was devised for striking from his hand the manacles which had hitherto shackled the husbandman. This was carried into effect, in the reign of Charles II., when, by the abolition of military tenures, (those slavish badges of foreign dominion), and of the odious prerogatives of purveyance and pre-emption, the services of the tenant were no longer measured by the arbitrary caprice of an imperious lord; but clearly defined, permanently assured, and unalterably fixed on the broad basis of reason, humanity, and justice.

Little now remains to be added to the History of Agriculture: Suffice it then to say that, in consequence of the subject having, within the last century and a half, deservedly attracted the immediate attention of the most illustrious in the nation, from Lord Bolingbroke to the Leicesters, Spencers, and Westerns of our day; and, from a careful observation of the practical result of many proposed theories, and the adoption of the most successful, together with the wonderful assistance afforded by the application of chemi-

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cal and scientific knowledge and mechanical power, in its different departments, Great Britain, has, in the Art of Agriculture, arrived at a degree of perfection unknown to the most refined people of former ages, unequalled by the most industrious of the present.

Having left that favored country,—many perhaps not without its costing a severe pang,—a country which may without feelings of national prejudice be justly pronounced first in the scale of nations in improvement, comfort, wealth, power, and magnificence; we have adopted, as a future habitation, a land almost in the same condition as when it came from the hands of its Creator. It is in our power as it is our duty—and this appears to be the intention of our enterprising fellow-countrymen—to render this a noble territory; and to accomplish that object, although laboring under temporary inconveniences, we possess many and great advantages. For us there are no systems to be deduced from tedious, and perhaps disastrous experiments; no prejudices to overcome, more stubborn enemies than the obstacles which nature herself presents; no difficulties in fact to contend with which the advanced state of scientific knowledge will not enable us to triumph over and subdue.

With the experience of neighbouring colonists to direct us in questions connected with the climate and the soil; with machinery of the latest and most approved construction, with minds unfettered, stimulated by the impulse of successful rivalry to constant and unremitting industry; open to the conviction demonstrated by practical utility; the prospects of Australia Felix must be to her adopted children encouraging in the highest degree.

To them, to you, the unfolding of her internal resources will of course be the main object of solicitude; and in no particular does it appear to me that a more interesting or more remunerative line of operation is presented, than in the healthful, peaceful, and agreeable occupation of Agriculture.

I have I much fear trespassed too long on your patience; but my theme is one which could easily have induced me to dilate much more on many interesting particulars. However, having exceeded the bounds of an ordinary lecture, I have to request your indulgence for the injustice I have been compelled to do to the subject, and to return you my thanks for your gracious audience.

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TO

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OF

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IN

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VICTORIA.

DELIVERED BY

SIR REDMOND BARRY,

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THE HALLS OF EUROPE.

My good Friends,

It has appeared to me probable that now, as the contract for building this Hall is brought to a close, and you are about to disperse and take up employment elsewhere—it might be agreeable to you to hear some discourse respecting your work, and to compare what you have done with what has been done in other countries.

Reflection on the labour you have each in his sphere of usefulness expended on this building during the last four months, may be the more satisfactory to you when you consider the purposes for which it is immediately and ultimately intended — when you know that they are of the highest social importance to which our ambition may well be directed, and when, in addition to this, you can assure yourselves that the building recommends itself especially to your recollection, inasmuch as, in its present state of advancement, it exceeds in magnitude many of the largest with which you may be acquainted; and further that it bids fair to rival, when completed, those of the greatest distinction and celebrity in other lands.

It will be a relief to your minds to be informed at the outset that it is not within my purpose to preach to you on Architecture. For me, a layman, to lecture on the subject of your daily occupation would be as impertinent as was the act of the rhetorician who descanted on the art of war in the presence of Hannibal, the Carthaginian general.

However, you will probably not be displeased to hear a few remarks respecting some of the great buildings of ancient and modern times—presented to you, not in strict historical sequence, far less with a critical spirit, but solely to furnish you with a mete-yard of comparison by which you may measure the dimensions of this great Hall, the work of your

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hands, and assure yourselves that yours has been no ignoble occupation.

Such an inquiry is interesting in many points of view.

By thus seizing a few of the boldest types with which man has left on the earth's surface the mark of his civilisation, there is ample material for reflection. We may not merely survey with astonishment and awe the vast proportions of the ruins which attest the power and affluence of peoples represented now only by shattered tribes, or vagrant outcasts —not the mere stones—though they be immensely larger than those employed in modern times—not merely the details of ornamental structure or the decorations unsurpassed in effect by the productions of the successors of the primitive artists—but, rising from these grosser material topics, we may seriously ponder on the men who did these things, on the early unfolding of the force of their intellect, on the grandeur of their conceptions, on the fertility of their genius, on the skill, intrepidity, and perfection with which they embodied their thoughts ; in days when the mechanical arts were in their infancy, when the application of steam as a motive agent was unknown, and while the world had not been favoured with the flood of little contrivances which the small cleverness of our age has poured upon us, and of which—being protected by patents—it is so proud.

The sequel of such considerations may be pursued at another time ; at present our first excursion is naturally to Egypt.

There, in the fertile valley of the Nile,—formerly swarming with a people under subjection to despotic kings,—are found the remains of works the reported size of which we might discredit but for the acknowledged veracity of those who have measured them. The alleged antiquity of them we might distrust but for the recent discoveries in chronology, verified in a great measure by the unriddling of the hieroglyphic symbols graved on the indestructible materials employed. Of these it is not necessary to offer to your notice more than two or three examples, for nothing is more truly descriptive of an excursion up the Nile than the expression, that after a time the traveller becomes listless from the perpetual succession

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of desolation, and feels "be-ruined, be-templed, and be-pyramided" * to death.

Having mentioned at a venture

Edfou	...	450 feet long,	by	155	wide,
Luxor	...	800 „	„	200	„
Karnac	...	1200 „	„	360	„

and leaving you to figure to yourselves great square, oblong, or irregular courts, containing forests of granite columns, with avenues of obelisks, sphynxes, and nondescript objects, and directing your attention to Lepsius' book on Egypt, the right royal gift of the King of Prussia to the Library, we will proceed to Greece.

As in Egypt, an ostentatious yet morose dominant influence exulted in the display of architecture in its most ponderous and durable forms—so in Greece the genius and character of the people presented it in a different aspect.

There, while liberty of thought was unfettered, while the poetic fire pervaded society, and while a religious culture prevailed, more intellectual than the debased superstition of the Egyptians, a greater elegance in style is to be observed.

This spirit extended itself to Asia Minor and to Italy, and other countries colonized by the Greeks. In all are to be found remains of large buildings, chiefly temples, erected in honour of the somewhat formidable body of gods and demi-gods who were believed to have originally tenanted or to have been admitted into Olympus. Portions of these have been so frequently repeated or imitated as to be sufficiently well known to most of you. Here then, as in the last instance, a few only will be mentioned in order to give you their size.

First in rank—though not the largest—stands

The Parthenon at Athens†	...	...	227 feet	by	101
The Temple of Jupiter, at Olympia		...	230 „	„	95

* Warburton: "The Crescent and the Cross."

† The Walhalla, near Ratisbon, a remarkable building, erected by Ludwig, king of Bavaria, under the direction of his architect, Baron Klenze, is a literal copy of the Parthenon of Athens, with the exception that it is elevated on a lofty terrace approached by a noble flight of steps, rendered necessary to secure an artificial plateau on a rock overhanging the Danube.

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That at Agrigentum, in Sicily ...	...	360 feet	by 173
That at Pæstum, in Italy ...	...	180 „	„ 80
That of Apollo, at Miletus ...	...	302 „	„ 165
That of Juno, at Samos	...	346 „	„ 220
And the Great Temple of Diana, at Ephesus, burned down B.C. 356, on the night Alexander theGreat was born, closely approaching in size the Cathedral of Milan, begun centuries ago ...	...	425 „	„ 220

An account, however brief, of the great buildings at Rome is more than you can expect on the present occasion; any effort on my part to give you one would be wholly unprofitable, while the history of the ruins which encumber the soil is involved in such obscurity, and while so much doubt exists as to the persons by whom the original buildings were erected, or the gods to whom dedicated, —alike forgotten,—or the uses to which they were applied.

There is one class, however, to which it is desirable for ulterior purposes your attention should be called, namely, the Basilicas, great rectangular Halls, used either as courts of justice exclusively, as the derivation implies, or as exchanges for the congregation of mercantile men, or for the joint accommodation of both commerce and the law. The largest was built by the Emperor Maxentius, defeated and killed in, or drowned after, the battle of Saxa Rubra, or the red rocks, Oct. 28, A.D. 312, within six miles of Rome, fought with Constantine, from which event the recognition in the Roman Empire of the Christian religion may be said to date.

Authors do not seem to be agreed about the dimensions of this, but the length being taken at close on 220 feet (the same as that of our hall), and the ground-plan approaching a square, its cubic contents must have been very great, although the symmetry of proportion could not have been as pleasing as other dispositions would have achieved.

The size of that called the Basilica of Ulpian, or Trajan, cannot be ascertained either, for although the width, 180 feet, is known, the excavations have not been carried out beyond 360 feet to either extremity, to determine the length. So far, however, as exploration has gone, enough has been developed to show that it must have been of enormous

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magnitude. At present the appearance it presents is peculiar. Two rows of massive columns, more or less mutilated and defaced, stand in a deep recess like a dry tank, many feet below the level of the streets which run round it, at the bases of the churches and houses erected on the consolidated heaps of rubbish accumulated during an unknown number of centuries.

Many others remarkable for their size and conspicuous for the splendour of their interiors existed at Rome. The flourishing provincial towns also vied with each other in rearing similar structures. These Basilicas were amongst the first buildings converted with the consent of the emperors into Christian churches—the transformation was progressive.

The vaulted tribune or *Hemicycle*, ornamented with mosaics and frescoes, in which were placed the curule chair of the prætor and seats for the judges, elevated above the *quadriporticus* or centre, in which the advocates and their clients assembled, and separated from them by the *bema*, assumed the name of the *apse;* in some instances it was enlarged and thrown back. Into this was moved the chair of the bishop and the seats of the prebendaries.

The altar, which had previously stood in front of the prætor, and on which in pagan times sacrifices were offered, or libations poured out, before the business of the court began, was covered with a *baldachino* or canopy.

This *quadriporticus* was subsequently expanded into transepts. The oblong entrance hall, formerly thronged with suitors, witnesses, and spectators, became a nave—the ship—or *gremium*—the bosom of the church—into which were admitted those who had passed through the probationary classes. By degrees the side walls were pierced for windows near the roof, and broken up with arches sustained by piers or by columns. Aisles were added, with pent-house roofs leaning against the principal walls, and on the occasions when the clergy swept in procession up the nave to approach the altar, the congregation shrunk reverentially into the aisles.

The other parts of the Christian basilica were the *atrium*, or court of entrance, surrounded by a columnar portico in semblance of the Court of the Gentiles in front of the Temple at Jerusalem.

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The *narthex** or portico, reserved for the catechumens until they had received baptism, and the penitents until they had received absolution. In some, as at Sta. Sophia at Constantinople, there was an outer or *exonarthex*.

The *cancellum*, or choir for the singers and inferior clergy, in which were the *ambones* or reading desks, found now in four only of the basilicas at Rome, St. Clement, St. Lorenzo, Sta. Maria in Cosmedin, Sta. Maria Maggiore.

The *crypt*, in which was kept the relics of the saint to whom the church was dedicated, the sacramental utensils, and ultimately in times of danger the treasures of its dignitaries.

In the Basilicas the men stood on the right, the women on the left, as in heathen temples and St. Barnabas in London; afterwards a *gynæconitis*, or women's choir, was set apart for the female sex; and in the cathedrals and abbey churches of later date was a semi-laic porch, near the western entrance, called Galilee, where women were allowed to see monks to whom they were related. When ascertained that it was proper to concede to them the privilege of an interview, the attendant addressed the visitor in the words of Scripture: "He goeth before you into Galilee; there shall you see him."†

Two basilicas have been erected within the last few years, in close adherence to the ancient form, each a gem in itself; one, at Munich, has an exterior of plain red brick—inside it blazes with the choicest marbles.

The other is near Salisbury, built by the late Lord Herbert, upon which an immense sum of money was expended.

Leaving Italy for a while, you are invited to return to the regions of the East, to contemplate the great architectural achievement of the 6th century.

The 1st Basilica of Sta. Sophia was erected by the Emperor Constantine, A.D. 326, after he had removed the seat of government from Rome to Byzantium, and given that city the name of Constantinople. As we are talking of

* *Narthex* means the rod of the Greek pedagogue, signifying that the neophytes were there "*sub ferula*" under correction.

† Du Cange: "Gloss. in voc." Matt. xxviii. 7.

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names let me beg of you not to imagine that Sta. Sophia was a lady of his family or acquaintance—the title was conferred on the church because it was dedicated, not to a saint of the female sex but to the "Holy Wisdom," which in the Greek language is of the feminine gender.

The 2nd, built by Constantine, A.D. 360, who united with it the contiguous church of Irene or Peace, was burnt, A.D. 404.

The 3rd, built by Theodosius, A.D. 415, was set fire to and destroyed during the tumults of the blue and green factions, who in their day did as much mischief as factions of later times, one of the colours adopted being of a different hue.

Justinian erected the 4th, A.D. 532, which continues to the present day. Shortly after it was completed it was injured by a severe shock of earthquake, and since that time it has suffered much both outside and inside; for buttresses, props, and excrescences of all kinds, sadly disfiguring the exterior, have grown up to support it from without, and on the taking of the city by the Turks, A.D. 1453, it was converted into a mosque.

Such was the apprehension of the Mahomedan true believers, lest the presence in a mosque of any representation of animal form or created being might cause a relapse into idolatry, the pictures were cut in pieces, the marble statues were broken up and calcined into lime, the other works of art collected with vast labour and expense from all quarters of the Empire were hewn into fragments, and a coat of white-wash obliterated the elegance of the frescoes, and the delicacy of the mosaics; as you may conceive the gilding was easily disposed of.

For centuries before the time of Justinian, the Roman architect had done little to vary the form of temples, the style of which he imitated—and it was not until a late period, that the dome borrowed from the East superseded the simpler arrangement of the Grecian roof.

Justinian,* assisted doubtless by the knowledge of his

* Justinian was evidently an advocate for long hours of labour, but it would appear that he could not enforce them, for something resembling a desire for the "Eight Hours" system must have existed then. We are told that, clad in a linen tunic, he visited the works every day,

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architect Anthemius, and the oriental draughtsmen, undertook a task as novel as it was bold—namely, to place at a height unattempted before, a dome smaller indeed, but flatter, than that of the Pantheon at Rome. This he flanked by two semi-domes, whereby the whole unsupported expanse of the central aisle was made nearly double that of the Roman Temple; and by introducing forty windows into the centre dome, five into each of the semi-domes, and piercing the side walls with numberless others, he poured in light, and distributed it for the illumination of his vast treasures in a mode infinitely better than that used in the Pantheon, where light is admitted only by one aperture, an open ring at the apex of the dome. Moreover, he thus relieved the heaviness of the necessarily ponderous supports, and threw an air of extreme radiance and brilliancy over the scene. The dimensions of the church itself are somewhat unusual, 360 ft. by 229 ft. The dome rises to a height of 182 ft. above the floor. The *narthex* or entrance porch measures 202 ft. by 26 ft.

You all recollect the story of the gruff old miller who refused to sell to Frederick the Great of Prussia the land on which stood his wind-mill, an unsightly object close to the terrace of the Palace of Sans-Souci. Frederick wished to have it pulled down, but the king, who could conduct the seven years' war to a glorious conclusion, could not induce him to part with his inheritance. The old mill stands on the same spot yet, telling its tale of the unaccommodating spirit of independence of the ancestor of its present master, and whirling its arms as indifferent to the contests now going on between William of Prussia and Francis Joseph of Austria as to those between Frederick and Maria Theresa more than a century ago.

You also remember the tale told of the difficulty experienced in getting rid of the apple-stall, kept at Hyde Park

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and was used to drop money amongst the spalls in order to induce the artizans to linger at their work, until able to pick up the coins unobserved in the twilight. Can it be possible that the resort to this—for an emperor be it said, with all deference—shabby expedient, produced the fashionable "Government Stroke," so cordially approved by the society for the encouragement of native indolence.

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corner, on the site of the old Pillars of Hercules Inn, when the ground was wanted for purpose of building. History repeats itself even in its grotesque incidents, for Justinian was beset by similar troubles.

Desirous to erect a temple more spacious than either of its predecessors, he endeavoured to induce the proprietors of the adjoining land to part with some, so as to afford him a larger area for his operations.

The first person applied to was a widow lady of rank named Anna; she declined to part with her estate, even as she said if offered 50 lbs. weight of gold. As you may imagine, corner allotments in the neighbourhood of Sta. Sophia rose thereupon considerably in value, probably to £740 a foot, at which rate land was sold last month in Bourke-street. At last the emperor waited upon her in person—with persuasive eloquence he pressed his suit. The lady, moved by his condescension, threw herself at his feet, besought him to accept it as a free gift; the sole stipulation on her part being that after her death she might be interred near the sacred edifice.

The next person addressed was named Antiochus, a wealthy citizen, who had been a doorkeeper. He valued his property at 50,000 pieces of money. Acts of Parliament with compulsory arbitration clauses were then unknown; but an expedient was suggested by an ingenious courtier, which produced the desired effect. Aware that this churlish non-vendor was passionately addicted to horse racing, an order was obtained and he was cast into prison. For some time he lay there not daring to murmur or inquire the cause of his incarceration. The *Habeas Corpus Act* was not yet invented. As the time for the annual races approached he became restless and uneasy, fearing that he would lose the greatest enjoyment of his life. The subtle courtier then approached him, insinuating that a concession to the wishes of the emperor would ensure to him his liberty. He adhered bravely to his resolution until the first day of the races was over; but when the Constantinopolitan Leger, or Derby, was about to come off, the shouts of the people, cheering the green and blue, &c.—the colours of the rival jockeys—penetrated to his cell, he could stand it no longer:

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he cried out, "I will see the races. I will agree to any terms."

85 lbs. weight of gold was handed to him, the necessary deeds were presented for his signature, being attested by formal witnesses,—the ministers and all the senate,—he was released.

We are not informed further by the historian* whether he made a fortunate "book," or whether he had recourse to the prætor to be relieved in equity against the instrument so executed by him under the pressure of duress.

A sturdy cobbler "Xenophon," his name also is preserved, for a long time resisted all overtures. Wearied at last by repeated applications he made a proposal which, as he expected, would set the question at rest. He agreed to give up possession for 14 lbs. of gold, provided that on the day of the great festival of the annual races he should be placed on a throne, and receive from the four great factions the same honours as were paid to the emperor.

To his surprise his terms were accepted; and on the appointed day he was clad in robes of ceremony, and led with great pomp to a throne in front of the Amphitheatre.

However, the populace with one voice declared that they would not submit to the indignity of beholding such homage, as was due only to the emperor, paid to this obscure individual. Some casuist present hit on an expedient by which the scandal might be avoided, and the promise of the sovereign literally fulfilled. The throne on which the son of Crispin sat was wheeled round, and he was turned with his face to the wall. The ingenious expedient diverted the spectators, the guards presented arms, and the courtiers and the factions, with mock solemnity, made their profound obeisances to the disappointed and mortified cobbler.

After the final collapse of the Roman power in the West of Europe, and the interregnum of confusion caused by the incursions of barbarians from the East and North, followed the creation of the Empire of Charlemagne. At his death occurred the subdivision into separate kingdoms, of those territories no longer held in subjection by his iron hand.

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* Codinus: "Script. Byzant."

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For a time the kings of Europe were engaged in strengthening their dominion over their feudatory vassals and people, by erecting palaces and fortresses.

The rapacious nobles covered the face of the country with castles, from which they issued forth at times to ravage the possessions of the defenceless peasantry.

Meanwhile trade, shunning the paths of danger, left the regions of the South, and carried on its operations by caravans from the East, which traversed Russia and Poland, and found an emporium at Wisby, on the Baltic.

This town on the now neglected Island of Gothland, was once a grand emporium, at which the annual confluence of merchants from all parts of Europe must have been considerable.

A judgment as to the wealth of the early inhabitants may be formed from the cathedral, which, with seventeen churches (some of the tenth century) still exist, and from the ruins of more than forty other churches. Rare objects such as tables of marble, porphyry, jasper, and vases of the precious metals, which have been found, bear witness to their luxury.

Their wisdom as legislators is attested by the maritime code framed there, still known as the Laws of Wisby.

From this, now obscure, seat of trade may be traced the development of that commercial enterprise which led to the rise of the Hanseatic Towns, those which sprung up in Lombardy, the Venetian Territories, and in other countries, which in due time swelled into prosperous municipalities.

The activity of the burgesses was stimulated by grants of divers privileges and immunities. The enjoyment of their riches was secured to them by the concession of important rights and material guarantees. Associated there in democratic self-governing bodies, a necessity arose for suitable buildings in which to transact the business of each society.

First among these is the Palazzo della Municipalita or the Palazzo della Ragione, at Padua, built between the years A.D. 1172 and 1219. It was originally 267 feet in length, and consisted of three chambers; but in the year A.D. 1306 an Augustine friar, named Frate Giovanni, who had travelled

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much, proposed to remove the subdivisions, and cover the whole with a stupendous roof unsupported by pillars, on a plan similar to one which he had seen in a palace in India. Pleased with the daring novelty of the design, the Paduans employed him to undertake the work, which he completed, receiving as remuneration the materials of the old roof.

The vast hall is now 240 feet long, by 86 feet wide, and 80 feet high, the largest of the kind in Europe. The interior is dull and gloomy, and the exterior is destitute of any architectural attractions to relieve the monotony.

In the hall are two objects which arrest the attention of the traveller. One, the monument of the Roman historian Livy—who was born in the town, and lived at the time of Augustus, more than 1800 years ago—respecting the authenticity of which the most credulous may be allowed to entertain some doubts. The other, the Lapis Vituperii or Stone of Disgrace.

To this, dishonest bankrupts were, by a very salutary local custom, haled by their defrauded creditors, and on it they were enthroned. In one respect, as well as in others, the ceremony which followed differed from that which occurs occasionally in Westminster Abbey at the Coronation—when the monarch is allowed to seat himself as gently as is pleasing to his majesty in the chair of Edward the Confessor, under which is placed the Stone of Scotland, brought from Scone by Edward I., A.D. 1297.* For the unceremonious creditors seized the delinquent defaulter by the legs and arms, and bumped him on the penitential pillar with more or less violence according to the probable amount of dividend expected to be derived from his assets. After submitting to this expiation, which absolved him from his debts, and has given rise to a vernacular proverb, he was discharged.

Vicenza also boasts a similar hall, known by the same name. The primitive Italian-Gothic exterior, so distasteful to the genius of that people, has undergone a change vastly

* On the fatal stone were engraved two doggrel lines—

"Ni fallet fatum, Scoti, quocunque locatum
Invenient lapidem—regnare tenentur—ibidem."

thus translated—

"Or fate's deceived, and Heaven's decrees be vain,
Where'er they find this stone the Scots shall reign."

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for the better. It was cased by the celebrated Palladio with a new front of two orders, the Doric below the Ionic above, in what has been considered one of the most happy of his compositions. Another kind of building differing in style, called Broletto, and used for the like purposes, is found in the northern towns of Italy, formerly independent—Como, Milan, Brescia, Bergamo, Monza, and others, each possesses one of these. The lower story with open arches serves the purpose of a market, over which is an upper floor with usually a spacious hall, in which the political affairs of the city were transacted.

Commerce exercised in Belgium an active influence, similar to that already noticed in Italy, and Municipal, Trade, and Guild Halls sprang up in that country about the same time; some bold, elaborate, and tasteful; some overladen with singular disproportioned and grotesque decoration. Ghent, Bruges, Liege, Louvain, Mechlin, Mons, Oudenarde, and other Flemish towns, present numerous Halls of this class, evidence of the wealth and enterprise of the inhabitants. That of Ghent, if completed, would have exceeded in size and beauty all existing in that country of Mediæval magnificence, but it remains unfinished.

That at Brussels, began in 1401, finished in 1455, measures externally 264 ft. by 50 ft. It is of remarkable character, with a tall graceful steeple and spire, 374 feet high, one of the most elegant in existence, and with one of those quaint steep roofs, in which are four tiers of windows to light a succession of garrets, crowded, in all probability, in those days with hundreds of poor families.

The narrow limits of the trading towns, confined within walls to protect the industry of the burghers from the rude attacks of the idle marauding barons, suggested to the architect the necessity for raising story over story to economise space. The sagacious adaptation of the rules of art to encounter these adverse circumstances produced in several of these buildings the effect of dignity of style and lightness and harmony of proportion.

The Cloth Hall of Ypres is still larger than the Town Hall of Brussels, presenting a façade of 440 ft., with an imposing square tower and belfry in the centre, nearly 300 ft.

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high, and a charming pinnacle at each end. It is also of older date, the foundation was laid in the year 1200, by the "pious, chaste and brave" Baldwin, Count of Flanders, but not finished until the beginning of the next century. Baldwin was one of those stalwart Crusaders who joined the French and Venetians in their attack on Constantinople, led by the Doge of Venice, "blind old Dandolo," then in his 97th year.* Byron alludes to him in "Childe Harold's" lamentation over fallen Venice, now,—if our telegrams may be relied on,—no longer true in its application to that city :—

> "The Suabian sued, and now the Austrian reigns:
> An emperor tramples where an emperor knelt.
> Kingdoms are shrunk to provinces; and chains
> Clank over sceptered cities; nations melt,
> From power's high pinnacle, where they have felt
> The sunshine for a while, and downward go,
> Like lauwine loosen'd from the mountain's belt.
> O for an hour of blind old DANDOLO!
> Th' octogenarian chief, Byzantium's conquering foe."
>
> *Childe Harold*, c. iv., *St.* 12

The city yielded to the power of the combined forces, and the deposed emperor, Isaac, with his son Alexis, were placed on the throne. An insurrection ensued, which led to the assassination of both these princes—to a fresh attack on and capture of the city. The usurper, named Murzuphlus, was hurled from the top of a column 140 feet high. Baldwin was elected Emperor of the East and, unhappily for him, he exchanged the humbler and more stable government of his peaceful subjects for the dangerous attractions of an imperial crown. Involved in war with the Bulgarians, he was taken prisoner, and the historian† tells us that having resisted the licentious approaches of the Queen he was made to suffer a cruel death.

You may be reminded here that "*diaper*," the figured linen in daily use, derives its name from the town of "Ypres." It is a variety of the fabric known to housekeepers as "Holland," for which the looms of the Netherlands were

* This age may be accepted on the evidence, in preference to 80, fixed by some writers.

† Nicetas: "Hist. Byzant."

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famous. Of this material, as you recollect, at 8s. an ell were made the dozen of shirts which Mistress Quickly bought for Sir John Falstaff,* and it must have taken a tolerably large quantity to envelope that bulky personage. These the ungrateful knight disparaged as "filthy *dowlas*," an inferior stuff produced at Dowlais, a town in Picardy.

The finest kind of linen was made at *Cambray*, whence it is still known as "*cambric*."

"*Mechlin*"† gave its name to the most delicate lace. In like manner many other commodities employed for domestic use took their names from the places where they were manufactured. Thus "*Arras*," a town in Normandy, supplied the hangings with which, in semi-barbarous times, the rough unplastered walls of state rooms were hung, while the stone or earthen floors were strewed with rushes. Behind the *arras*, as you remember, Polonius concealed himself by preconcerted arrangement to overhear the conversation between Hamlet and his mother, an artifice which cost the inquisitive old gentleman his life. The "*jane*,"‡ of which your wife's

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* Hostess.—You owe me money, Sir John, and now you pick a quarrel to beguile me of it. I bought you a dozen of shirts to your back

Falstaff.—"*Dowlas*," filthy "*dowlas*." I have given them away to bakers' wives, and they have made bolters of them.

Hostess.—Now, as I am a true woman, "*Holland*" of eight shillings an ell. *1st part of Henry IV., Act* iii., *Scene* 3.

† "The silver knot o'erlooks the Mechlin lace,
And adds becoming beauties to the face.
Brocaded flowers in the gay Mantua shine,
And the rich stays the taper shape confine."—Gay.

‡ Jane signified also in Chaucer's time a coin. He says:

"Of *Brugges** were his hosen broun,
His robe was of ciclatoun,†
That coste many a *Jane*."
The Rime of Sir Thopas, 15, 145

They were also called Gallie men, or Gallie half-pence, and were imported by sailors trading to Genoa, who landed their cargoes at the Gallie key in Thames-street. The use of them was forbidden by 13 Hen. IV. cap. vi., and again by 3 Hen. V. cap. i., by the name of Gallie half-pence, and half-pence of Genoa, and it was made felony to use or import them or *suskins* and *dotkins*, and all manner of Scottish money of silver. The suskin was a Flemish coin, the dotkin Dutch

* A town in Belgium.

† Whether this material was of silk or leather, stamped and gilt, is uncertain.

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boots are made, came originally from Genoa. The "*kersey*," which some of you perhaps wear, is by divers etymologists supposed to be a corruption of Jersey. The derivation of your *guernseys* is more obvious; *worsted* is so called from a village of that name in Norfolk, colonised by a body of Flemings in the reign of Henry II. Russia and Morocco denote the countries from which come particular kinds of leather; the *cordovan* used in our boots from Cordova, the ancient Corduba, in Spain, gave the appellation of "cordwainer" to that useful craftsman, and the name to one of the wards of the city of London; "*fustian*" in your jackets was introduced from *Fustat*, or Old Cairo in Egypt, situated about four miles from the present town; as also "*dimity*," from Damietta, a town on one of the seven mouths of the Nile; "*cyprus*,"* the cloth used in mourning, was brought from the isle of Cyprus; "*gauze*," from Gaza in Palestine; "*damask*," from Damascus in Syria; "*sarcenet*," is the silk of the Saracens.

As our milliners and mantle makers immigrated into England from Milan† and Mantua, in Italy, with their "*Paduasoys*," or silks of Padua, in their "Port Mantuas," or Portmantles, fashion went further afield; "*muslin*" was brought from Musool, in Mesopotamia; "*taffety*" from Persia; "*calico*" from Calicut, in the East Indies; "*chintz*" from the same country; "*nankin*," so much in vogue when patronized by the late Prince Regent, came from that town in China, paid for, according to the substantial rules of the Celestial Empire, in "*cash*," that is, in hard dollars, not in the rude copper money of China, perforated and hung on strings, the name of which, as a general term for coin, has been also incorporated into our language.

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was a diminutive of the doit, a coin, of which Shakespeare frequently makes mention, so called from *digitus*, Lat., *doigt*, Fr., because no bigger than the top of the finger.

* Amongst the wares offered for sale by Autolycus are:

"Lawn as white as driven snow,
Cyprus black as any crow."
Winter's Tale, Act iv.

† Stowe says that, in the time of Edward VI., there were not above a dozen milliners in all London. The commodities they dealt in chiefly, were owches, brooches, aglets, spurs, caps, glasses, &c., wares that came from beyond the seas, from Italy, from Venice, France, or Spain.

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Having thus glanced at the causes which influenced the growth of Secular Architecture, your attention may be called to other causes which operated in another direction with even more striking results.

The remarkable increase of the temporal power of the Pope, and the vigorous development of the chief monastic orders about this time, gave a marvellous impetus to the erection of the great cathedrals, conventual churches, and religious houses on the continent of Europe. Of these—

In France :

Autun,	Notre Dame,	Rouen,
Rheims,	Amiens,	Chartres :

In Spain :

Seville,	Salamanca,	Toledo,
Saragossa,	Burgos,	Valencia.

with fifty others, leap into the recollection before utterance.

In England, the invasion by William I., the confiscation of the estates of the Saxon nobility, and the profuse endowment of the ecclesiastical bodies, combined to create a new epoch in the history of Architecture, displacing the homely Saxon by the ponderous and proud Norman, and giving the successive transitional gradations of the pointed,* or early English, florid, or geometrical, and perpendicular styles.

It is not my intention to dilate on any of the interesting subjects connected with these stupendous buildings. In some, in their gradual enlargement during five centuries, from the Conquest to the Reformation, many portions distinct in style were inharmoniously mixed.

Como, already mentioned, was—as you who are members of the "mystic tie"† must be aware—the cradle of the

* The pointed arch is formed by the segments of two intersecting semicircles struck from points equidistant from the centre of a common diameter. Its origin has been the subject of much learned disquisition, supposed at one time to have been the offspring of the Saracenic, at others to have grown out of the Roman, through the Saxon and Norman. Probably we must look to the Oriental nations for the parentage common to all the arched and vaulted styles.—*Archæologia*, xvii.; Gibbon, vol. vii., 33; Knight's *Principles of Taste*, 162.

† This bond of union seems to have been stronger than any charter, for it is a remarkable fact that the masons were never legally incor-

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great Guild of Freemasons, and she sent forth in the 11th and 12th centuries organised bodies of workmen to undertake the erection of those great works which distinguished that age. So long as the designing and planning of them were in the hands of the clergy—the only men of learning and taste in those rude times—these buildings reflected the lofty aspirations, the swelling pride and pomp, or the elevated devotional feelings by which the originators were animated. But when the great Masonic bodies became so powerful as to imagine themselves independent of the guidance and influence of their clerical directors, a change occurred at once. Admirably skilled to execute the technical details of their calling, they usurped the planning as well as the construction of their buildings. The result was that an historic era is now palpably defined throughout Europe, by a belt of masonry devoid of taste and the higher elements of beauty. The buildings of this period were erected by honest, plain, practical, but ignorant self-sufficient men, during the time which elapsed between their having discarded the direction of the refined clergy and their having surrendered themselves at discretion to the dominion of regularly educated, enlightened, professional lay Architects.

Your own experience will supply instances in which a like assumption by builders, acting in a sphere beyond their capacity, has entailed on their employers much inconvenience and loss, while they themselves have gained neither in pocket nor in reputation.

You will not, however, refuse to be detained for a short time to learn the length of these buildings; an attempt to give the width is abandoned, for, varying as it does in different parts by projecting chapels and porches, the statements of different authors cannot be reconciled.

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porated like other traders. That they held annual chapters to fix the rate of their wages, to the subversion of the law and *grevous* damage of the commonalty in violation of the Statute of Labourers, is apparent from the Act 3, Hen. VI., c. 1, which forbids such confederation, and makes such act felony. Coke's *Inst.*, III., 99. Hallam's *Mid. Ages*, iii., 435. Stowe, v., 215, says they did frequent a mutual assembly in London in the 12th year of K. Henry IV., and arms were granted to them by William Hawkestone, Clarencieux King-at-Arms, 13 Ed. IV.

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In some instances that of the west front is given, in others that of the nave alone, in others of the nave and aisles, in others the length of the transept only is supplied, while some are measured from inside, others from outside the walls.

The most convenient mode to bring their respective proportions within your grasp is to present them in groups, thus you will find that—

Four exceed 500 feet in length.

Winchester ...	560
Ely	517
Canterbury ...	514
Durham	510

Six are 400 feet and upwards in length.

York	483
Salisbury	480
* Peterborough ...	476
Lincoln	453
Wells	415
Gloucester	400

Seven exceed 300 feet in length.

Worcester	394
Norwich	382
Exeter	380
Lichfield	370
Chester	350
Hereford	325
Rochester	306

Seven exceed 200 feet in length.

St. David's ...	290
Llandaff	270
Ripon	266
Chichester ...	261
Bristol	241
Bangor	233
Bath	210

Three exceed 100 feet in length

St. Asaph ... 179 Oxford ... 152 Carlisle ... 137

The roof of the last is waggon-shaped, painted blue and powdered with gold stars; that of the Cathedral of

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* The remains of Queen Catherine of Arragon were, A.D. 1536, laid in an humble grave within the north choir aisle of this, then an Abbey Church. Probably to the fact that this lady was interred there,—to whose existence, as an immediate moving cause, may, in a great measure, be attributed the change of religion in England, and the suppression of monasteries,—may be ascribed its preservation, and the erection of Peterborough, with Oxford, Bristol, Chester, Gloucester, and Westminster into bishopricks. No more queenly sanctuary could be found, and in no respect could Her Majesty's dying injunction have been more suitably complied with.

> When I am dead, good wench,
> Let me be used with honour. Strew me over
> With maiden flow'rs, that all the world may know
> I was a chaste wife to my grave. Embalm me,
> Then lay me forth; altho' unqueened, yet like
> A queen and daughter to a king, inter me.
>
> *Henry VIII., Ac* iv., *Scene* 2.

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Amsterdam is of similar shape, the same mode of construction as you may remark has been adopted for our Hall.

Owing to the strictness of the "Reviewers" at the time of the Reformation, and in the reign of Queen Elizabeth, also to the sternness of Cromwell's round-head soldiery, many of these cathedrals have been sadly desecrated and despoiled of some of their fairest decorations. The praiseworthy liberal-mindedness of the present day is engaged in making amends for the follies, the crimes, the neglect, of the past. The work of restoration goes on well.

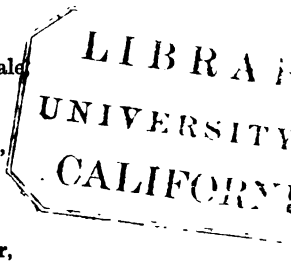
Let me here venture to assert, even at the risk of offending those purists who contend for the pre-eminence of the ancient Greek orders, that the architecture of this period appears to me far more surprising and agreeable than they are. The beetling tower, the spire rearing its flame-like point on high, the arches of every degree of curvature, the flying buttresses—features unknown to the formality of Greece or Rome—impart to Gothic buildings an air of grandeur and of stateliness not achieved by them. The transmission of light through tall graceful windows, their delicately-involved tracery embellished with glass of curiously-toned colour—and its diffusion in mellowed rays, through aisles, the arched and groined roofs of which, enriched with pendants and bosses, were supported by columns and vaulting shafts of every form, simple and composite, give to them a wondrous superiority over the ancient forms.

In the interior of those where regularity consistently prevailed, perspectives so diverse, vistas at once so complicated yet so simple, could not exist. In consequence of the largeness of their component parts they may have deceived the eye by appearing smaller than they actually were; while in the cathedrals the deception is of the opposite kind; for the smallness of the members, and frequent repetition of them, delay the eye while taking in the scene, whereby the interiors are magnified apparently beyond their real dimensions. In many of those, as the Pantheon, a cold or dazzling glare would occur; no such floods of light and masses of shade would be attained. In sculpture and colouring they certainly could not have been exceeded; nevertheless, in the cathedrals

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the countless modifications of ornament, carving, chasing, monumental sculpture, mural tablets, armorial achievements, emblazonments, and other accessories, combine to produce a gorgeous aggregate not permitted, according to the rules of severe simplicity, by which the Greeks bound themselves.

To some, at least, of these sacred fanes most, if not all, of you have been visitors. You must on such occasions have been imbued with feelings of amazement and reverence, and could not have departed without admiration of your ancestors—workmen like all of us—whose high privilege it was to be engaged in their generation on such enduring monuments of the national taste, skill, and religious enthusiasm. You must, therefore, recognise the force of the poet's words when designating them as places conducing to evoke the holiest sentiments, he says—



But let my due feet never fail
To walk the studious cloyster's pale,
And love the high embowed roof,
With antick pillars massy proof,
And storied windows richly dight,
Casting a dim religious light;
There let the pealing organ blow,
To the full voic'd quire below,
In service high and anthems clear,
As may, with sweetness, through mine ear
Dissolve me into ecstasies,
And bring all Heav'n before mine eyes.

Il Penseroso.

Let me, also, at the hazard of arousing the indignation of our own highly intelligent body of Architects — whose resentment is most respectfully deprecated—express my regret that, with such models before them, the ecclesiastical architecture of Victoria is not allowed to exhibit more becoming examples of their ability.

The enterprising town of Ballarat may boast of two, amongst its numerous churches, which reflect credit on the professional education of the designers—who they are is to me unknown—as well as on the liberality of the congregations.

But what is to be said for our capital, with its 120,000 inhabitants, so provided with houses of worship as it is. It

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cannot be affirmed that there are many possessing any architectural pretensions. True it is the great cathedral of the Roman Catholic body is conceived in a spirit which raises expectations that when finished it may accord in lordliness of style with not a few of the edifices enumerated above.

But what must not the candid and impartial admirer of the art of architecture admit on behalf of the rest.

Martin Luther said he "had no idea of allowing the Devil to have all the good music to himself," and he insisted on his followers cultivating the art to the honour and glory of God,—in humble deference then to the good sense, as well as true piety of this reflection, may we not ask why are all the pains to be lavished on the secular architecture of Mammon? Cannot the talent which furnishes such respectable designs for buildings, public and private—worthy of a place in any city in Europe—be equally fertile in resources to dignify those intended for loftier and more serious purposes than the despatch of business and the acquisition of wealth? No answer will be more ready, and none less satisfactory, than that the genius of our architects is fettered by the limited funds at their disposal. A truthful adherence to the rules of proportion, and a dexterous application of the principles of construction, would enable them, surely, to produce for the same amount something more becoming.

Prayers offered up with an humble, lowly, and contrite heart, may be acceptable in whatsoever species of building the penitent sinner may be; nevertheless, the adoration of Nature's Great Architect cannot be the less acceptable if reverently tendered in something somewhat better than a barn-like structure of bluestone or red brick disfigured by a lean ill-featured imitation of the portico of a heathen temple, or some other costly as well as inappropriate unsightly adjunct in front.

And it appears to be an uncomplimentary depreciation of their abilities—disclaimed altogether on my part—to assume that our Architects are unequal to cope with difficulties, triumphed over centuries ago, in favour of the indigent villagers of the poorest parts of Europe.

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Take, for example, what has been done within the last few years at the obscure hamlet of Mousta, in the island of Malta. A new church was required, and after long debate between the pastor and the parishioners, it was resolved to copy the Pantheon of Rome. The chief reason which induced these artless people to adopt the plan and overlook all the attendant difficulties was, that the new church might be erected around and over the old church of their forefathers, in which they might continue their devotions until the new edifice could be consecrated.

To an architect named Grognet the merit of the suggestion is attributed, but the real hero of the piece is the village mason, who can neither read, write, nor draw—and a brave workman is Master Angelo Gatt. For twenty years he toiled at wages of fifteen pence a day, in directing his neighbours, the majority of whom contributed their labour gratuitously. In consequence of the deficiencies of his education he was compelled to accept ornamental details, selected for him from books by other persons, not always with the most correct judgment, yet his name deserves to be held in remembrance throughout all time.

You are, doubtless, aware that in India some of the domes* were formed on moulds of earth, piled up inside the building as it progressed ; on this the arch was laid, and after a proceeding, of which the beaver or the bee would be ashamed, the key-stone was set. The earth was then removed from the interior in little baskets, holding about a couple of shovelfuls, borne on the heads of the slender labourers.

This primitive substitution for centreing was used near Bombay, in the erection of a mausoleum for a native prince (as it was told to me), so late as the year 1862. The domes of Europe, when not of stone, are in most instances formed of shell within shell, held together by massive bands of metal put up by workmen on stages, supported from below or suspended from above.

* This of course does not apply to the Jain cupolas, not strictly domical in form, constructed with large flat stones placed in horizontal layers, supported by struts, and propped by numerous pillars.

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But brave Angelo Gatt was not to be daunted, albeit his dome is 16 feet larger than the cupola of St. Paul's in London.

He struck out a new line for himself, and following the promptings of his natural constructive genius he completed his dome without help of a scaffold. Exercising his own intuitive acuteness he made a discovery which would have added lustre to the renown of Michael Angelo Buonarotti or Christopher Wren, and by simply notching each course of stone into that below he accomplished the astonishing feat.

The work being finished the old church was taken to pieces and carried away within a week, and the simple rustics assembled on the following Sunday in a temple resembling in size, and—notwithstanding apparent mistakes of detail in ornament—in some respects positively handsomer than that which was the pride of the Consul Agrippa, the glory of the Augustan age.

It was my good fortune to visit this church in the afternoon of the Saturday preceding Christmas-day.

While admiring the interior—well adapted for the Roman Catholic worship, not necessary congregational, an arrangement which breaks up agreeably with shrines and altars the monotony of the great Rotunda—a rustling sound was heard. Unattended by an individual of the other sex, a band of women, exceeding 800, trooped in. All were clad in black silk,—the holiday attire of the poorest female in the island,—with *fal-lals* or hoods worn after the inexplicable fashion of the Maltese ladies. A few moments having been spent in silent supplication, they all knelt, and raised their voices with one accord in a hymn of thanksgiving and praise. The effect was sublime. Probably many an humble and warm prayer was offered up that day for honest Angelo Gatt. He had my good wishes; let me hope he has yours also.

To return from this digression, let me resume by leading you to the first great Hall of Westminster, 276 feet long, with two rows of columns down the centre; it was built by William II., A.D. 1197, on the site of the palace of the early Saxon kings.

When remonstrances were humbly tendered to his majesty

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on account of the heavy burdens and oppression of his subjects consequent on his having undertaken the enclosing of the Tower of London, the building of London Bridge, and this great Hall, he declared roundly that he meant this Hall only for his bedchamber, and would straightway build another larger and grander still. Possibly the hasty construction caused it to be not as truthfully built as it should have been; for it appears to have required frequent expensive repairs effected by Thomas A'Beckett, King John, and Henry III., before it was destroyed by fire.

King Richard II., A.D. 1397, erected that now standing—though it is not unusual to hear it called erroneously the Hall of Rufus—its length is 238 feet, breadth 68 feet, height 86.

Although sadly disfigured externally by the courts of law built up against one side, in a totally dissimilar style of architecture, the interior is highly imposing; in fact, no more ornamental roof of wood-work on such a scale has been attempted iu Europe, and no more august approach to the Houses of Parliament could well have been devised. So the adjustment to it of the corridors which lead to the different parts of them must be esteemed a most happy conception.*

Shortly before Richard commenced this Hall, he had caused the Royal Palace of Sheen, in Richmond Park, which contained a fine hall also, to be pulled down, because of his excessive grief for the loss of his wife, the good Queen Anne of Luxembourg, who had died there.†

Guild Hall, in London, from its antiquity, its beauty, and the numerous curious and affecting incidents connected with its history, is deserving of consideration as next in dignity and importance. The erection of it followed close on the completion of Westminster Hall, for the foundation was laid

* We are told by an old chronicler, that "This marvailous work was made with great costs, all which the king levied on strangers banished, or flying out of their countries, who obtained license to remain in this land by the king's charters, which they had purchased with great sums of money.—John Botterell being then clerk of the works."

† To her majesty is attributed the introduction into England of the custom of riding on a side-saddle, for which the ladies ought to hold her memory in grateful recollection.

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A.D. 1411.* In this noble apartment the municipal authorities have dispensed their splendid civic hospitalities to every king of England from the time of Henry V., as also to many foreign potentates, and many illustrious personages of all countries.

In it have been also held several important state trials, the enumeration of which would not entertain you much.

In it, A.D. 1421, the formation of a library was begun by that most worthy Lord Mayor, whose biography and that of his cat are well known by your children, Sir Richard (turn again) Whittington, in whose favour the chimes of Bow Bell rung out that he should be "thrice Lord Mayor of London."

It is asserted that the Duke of Somerset borrowed the books, and insinuated that His Grace forgot to return them.

Probably it is owing to this inauspicious commencement that the progress of this library has not been greater; for we find that, although it has received an acquisition of books formerly in the Dutch Church at Austin Friars, the number accumulated within 450 years does not exceed 30,000 volumes: the number our library collected within thirteen years is close on 45,000.

Guild Hall is in length only 150 feet, it is divided into eight bays.

The historical treatment of my subject obliges me to take you back for the third time to Italy, in order to refer you to St. Peter's, at Rome. In size this Basilica exceeds that of any building of the kind raised by the hand of man; for it is unfair to institute a comparison between the vast, roofless temples of Egypt, or the straggling, irregular buildings of other countries, and this consummate production of genius and courage.

* The chronicler informs us that towards the building the companies gave great benevolencies; also offences of men were pardoned for sums of money towards this work, and extraordinary fines, amerciments, and other things during seven years, and a continuation thereof of three years more; [illegible] to be employed in this building. You will, doubtless, be gratified by the assurance, that no such expedients as those last mentioned have been resorted to by the trustees, to enable them thus to erect this Hall.

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The construction occupied a period of 328 years, between the reigns of Pope Nicholas V., A.D. 1447, and Pope Pius VI., A.D. 1775. A description of its magnificence, of its contents, and of the countless objects of interest, in, and connected with it, would occupy many a summer's day; so let us pass to the Pantheon—a contrast between its dome and that of St. Sophia, at Constantinople, which it exceeds in size by 33 feet, has been already drawn.

You have now to witness the verification of the not idle vaunt of Michael Angelo Buonarotti, that he would "hang the dome of the Pantheon in the clouds."

The diameter of the lower concave is 139 feet, still 3 feet less than that of the Pantheon; but its height from the pavement to the summit of the lantern cupola, which surmounts the dome is 448 feet. You require some standard of mensuration, by which to adjust the eye of your mind to such Brobdignag proportions—such is furnished in the spacious nave, on the floor of which is inscribed the relative length of other churches, in which other countries pride themselves.

St. Peter's measures in length	613 feet.
St. Paul's, in London „	518 „
Cathedral of Milan „	443 „
St. Paul's without the walls at Rome	419 „
Sta. Sophia „	360 „
You will not have forgotten the length of	
Winchester	560 „

So that, as you see, the stupendous Roman Basilica is 53 feet longer than the largest cathedral in England.

It is of this that Byron says:—

"But thou, of temples old, or altars new,
Standest alone, with nothing like to thee—
Worthiest of God, the holy and the true.
Since Zion's desolation, when that He
Forsook his former city, what could be,
Of earthly structures, in his honour piled,
Of a sublimer aspect? Majesty,
Power, Glory, Strength, and Beauty, all are aisled
In this eternal ark of worship undefiled.

Childe Harold's Pilgrimage, Canto iv. 154.

You see from the representation on the canvas that in front of St. Peter's are two magnificent fountains, between

LIBRARY OF THE UNIVERSITY OF CALIFORNIA.

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and in front of which is an obelisk,* one of those mysterious monuments of which the Egyptians were the inventors.

This "big stone," 132 feet high (it is nothing more in fact, as it has no hieroglyphics or writing on it to tell its origin or purpose), was brought, A.D. 40, by the Emperor Caligula from Heliopolis in Egypt, the same as the city of On† mentioned in Scripture. It was placed in the forum of Nero, not far from its present site, and remained in that position for more than 1,500 years, until the architect Fontana was ordered by Pope Sixtus V., A.D. 1586, to remove it to where it now stands.

Having made his calculations, and prepared his apparatus, the architect summoned to his assistance 900 picked labourers to man his capstans, and marched at their head into St. Peter's, where the whole body devoutly attended a special mass and confessed their sins.

They then took their stations at the bars, and at the sound of a trumpet they swayed away merrily for several hours.

You may well imagine the phases of distrust, doubt, anxiety, and hope, which agitated the minds of the spectators, and the final burst of joy when a gun from the Castle of St. Angelo announced that the united efforts of the labourers had raised the enormous stone from its bed. Then the bells rang out from every church in the eternal city. Fontana, amidst exulting shouts, is borne in triumph round the scene of his daring and successful achievement.

For five months the obelisk remained suspended in air, until further necessary arrangements having been completed, the labourers were summoned a second time.

They submitted themselves to a repetition of the religious ceremonies, and then set themselves earnestly to the work.

The great stone was gently lowered from the perpendicular to one of its sides on to rollers, the stout battalion of 900 papal "navvies," aided by 140 horses, transported it to its

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* Some suppose that it was made to a Roman order, and as the sacred writing of the priests was not understood by the Romans, hieroglyphics were omitted. Of the eleven obelisks at Rome, three, viz., that in question, that in front of the church of St. Maria Maggiore, and that on the Monte Cavallo, are plain.

† Gen. xli. 45.

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new position, and it was with painful and incessant toil, protracted through the greater part of a day, raised gradually to its base, amidst cheers more vociferous than those given forth before.

A story is told that the Pope, to prevent the distraction of the workmen by conflicting orders, issued an edict, that whoever spoke a word during the course of these operations, should be put to death on the spot, without the benefit of clergy, and that when the lines were brought by the machinery to their greatest degree of tension, or as you understand it better, perhaps, "hauled taut to two blocks," an English sailor present cried out, "Bring some water, you lubbers, and wet the ropes."

Reasonable doubts may be entertained as to whether the humane pontiff did promulgate so sanguinary a decree. There can be none, even if we believe that our Jack Tar did get to the spot, that his orders would not have been understood.

The tale is, perhaps, as credible as that related by Pliny, who says that when King Rhameses erected one of the large obelisks in Egypt, desiring to ensure the safe performance of the work, he had his infant son lashed to the apex of it, so that the care taken for the safety of his child might ensure that of the stone for which he seemed to entertain a greater affection.

But there may be some foundation for the fact, that something unusual was done by somebody, as the descendants of a man named Bresea, of the town of Bordighera, in Lombardy claim, to this day, the monopoly of providing palms wherewith to dress St. Peter's, on Palm Sunday, in consequence of some meritorious act of their ancestor on that occasion.

Amongst the buildings of modern times are several of considerable dimensions, in which a reproduction of ancient classic forms has been preferred to the national English style. That truly majestic building, St. George's Hall at Liverpool, presents a bold front of 420 ft., broken by a portico supported by sixteen Corinthian columns, 46 ft. high. The interior is divided into chambers of noble proportions, ornamented in the richest style and with excellent

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taste. Nevertheless the dimensions of the largest apartment are only 169 ft. in length by 75 ft. in width, and 85 ft. in height. The design is taken from, and bears a close resemblance to, the great Central Hall in the Baths of Caracalla at Rome, begun A.D. 215, continued by Heliogabalus, and finished by Alexander Severus A.D. 229, though it is improved by containing five bays instead of three, as also in the details of ornamentation. An idea of the inferiority of St. George's Hall to its great prototype, and a comparison between the magnitude of each as a whole, may be gathered from the statement, that the entire building of St. George's is in size less than one-fourth of the central mass alone of the Roman Bath, itself enclosed by exterior porticoes 1840 ft. by 1476 ft., supported by enormous columns of granite. The ruins, which cover acres, have in successive ages been pillaged (especially by the Popes and members of the Farnese family) of their costly marbles and exquisite mosaics to adorn mediæval and modern palaces. From them have been exhumed also the well-known statues—the Farnese Hercules, by the sculptor Glycon; the group of Dirce and the Bull in the Vatican at Rome; the Flora, and the Venus Callipyge, which now grace the Royal Museum at Naples.

These must have formed but an insignificant portion of the choice examples of the highest order of art assembled for the gratification of the degenerate and luxurious descendants of the simple Roman of early days.

Their detractors certainly could not with justice have applied to the Romans of the Empire the unpleasing epithet of the "great unwashed," for, in addition to these, were other huge baths built by Nero, A.D. 65, Titus, A.D. 80, who finished the Colosseum,* Diocletian,† A.D. 302, and Constan-

* The economy or parsimony of Vespasian enabled him to exhibit this example of his magnificence, imitated almost immediately by the cities of Capua and Verona. Provincial cities vied with each other in the erection of useful works. It was the duty of the Proconsul to regulate this taste, sometimes to control the extravagance of their expenditure.—*Pliny*, Lib. x.

† Of those of Diocletian you may form some notion when told that the Church of Sta. Maria de los Angelos—one of the first magnitude—a monastery with goodly cloisters, and a garden in which are two Cypress trees planted by Michael Angelo, now thirteen feet in circumference, and

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tine, A.D. 326, each in succession surpassing its predecessor in size, and outvying it in magnificence—very different indeed from the steamy baths and wash-houses of which English municipal authorities are so conceited.

The Birmingham Music Hall is another instance of successful imitation of a renowned production of antiquity, which stood in the Forum Boarium, or cattle market of Rome. Three only of its fluted columns of Parian marble, considered to be the purest models of the Corinthian order extant, have survived the wreck of ages. Held together by bands of iron, supporting a fragment of an entablature, they stand in solitary grandeur, and by their symmetry and just proportion, fill every beholder with admiration.

They well deserve the name of "The Disputed Columns;" for it is somewhat doubtful whether they formed part of the Comitium (erected in front of the Curia), in which the election of priests and magistrates was held—originally open at the top, but afterwards roofed in;* or of the Temple of Castor and Pollux, or of that of Minerva, or of that of Jupiter Stator.

Critical and antiquarian authority combine to favour the latter opinion, and if that name be correctly assigned, they stand on the site of the first temple dedicated to that god by Romulus, in fulfilment of a vow made by him in the battle with the Sabines.† They came in arms to recover their wives and daughters taken from them by Romulus and his lawless followers, on the occasion of that flagrant breach of the laws of hospitality known as the Rape of the Sabines, with which you are sufficiently familiar. Such was the vigour of their onslaught that the Romans gave way. Romulus endeavoured in vain to rally his forces, who were pursued for some distance.

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a large row of storehouses, used by the Commissariat of the French Army for keeping provender for the cavalry, are all nestled in a portion only of one corner of these marvellous baths. They were built during the tenth persecution of the Christians, 150,000 of whom were employed for fourteen years upon them at forced labour. When they were completed the unhappy survivors were put to death.

* Livy, xxvii. cap. 36.

† Livy, i.

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As a last resort he implored the aid of Jupiter, promising that if the impending defeat were averted he would rear to him an altar on the spot. We are credibly informed by tradition handed down by the grandmothers of those who imparted the intelligence to the historian Livy, that the Deity thus invoked did interpose, checked the rout, restored the balance of the fray, and gave victory to the intrepid king. Faithful to his allegiance, he fulfilled his vow to Jupiter, adored as "*Stator*" who "*stayed*" or caused to stay the flight.

You will not fail to remark a material difference between the modern structure and the ancient in two obvious features. The Hall of Birmingham is elevated on a basement story, and the side walls are pierced with windows. These, which doubtless add materially to the comfort and convenience, and minister to the necessities of the moderns who frequent it, not for pagan worship in a genial climate, but for amusement in an inclement region under a murky, smoke-laden atmosphere, appear incongruous appendages to a Roman temple. The external dimensions are—

Length, 166 ft. Breath, 104 ft. Height, 93 ft.

The saloon measures in—

Length only 140 ft. In breadth, 65 ft. In height, 65 ft.

It is not within the scope of my present intention to dwell on any of the other novel classes of buildings created (if the term may be allowed), within our memory, such as Exhibition Buildings, Winter Gardens, Railway Stations, Markets, Riding Schools, which surpass in area and capacity the grandest and most solid structures of antiquity.*

From them you have an instructive exemplification of the result of the long contention between man and the ponderous materials with which he has been obliged to work, for your knowledge of your own business tells you the difference between the massive solidity of the Egyptian style and those of Greece and Rome, and again between them

* This remark is hazarded, as the dimensions of the Tower of Babel are not known. It does not apply to the Pyramids, Mausoleums, tumuli, or mounds piled up with like intent, in most instances almost solid.

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and the lightness and elegance of the Saracenic and Gothic styles.

In our day we have seen a combination of metal and glass produce effects which transcend any dreamt of in the luxuriance of oriental magnificence, although these must be regarded rather as achievements of the civil engineering power than of architectural ability.

Nevertheless, it is difficult to restrain myself from a passing mention of the Riding-school at Moscow.

That monster hall measures 560 feet by 158, and is, as far as my inquiries have enabled me to ascertain, the largest ever yet attempted having a flat ceiling, without columns of support.

Intended as it is for the exercise of cavalry during the winter season, when the thermometer is frequently many degrees below Zero, there are in it several huge stoves; these produce a singular effect, and enable the spectator to measure with the eye the vast perspective laid out before him. The walls are low, and even after an inspection of the large riding schools at St. Petersburg—especially that of the 2nd Regiment of the Cadets of the Guard—this seems oppressive by its immensity. The interior of the roof, open for the examination of the curious, presents a remarkable complication of rafters, tie-beams, and rods, perplexing in the extreme to those not skilled sufficiently to perceive that the sustaining power is admirably applied, and that the arrangement is highly commendable on account of its simplicity.

Other spacious and well known buildings in the old world have not been mentioned, and no allusion has been made to several countries in which some of great stability and truly grand proportions exist. A fear lest your patience, already overtaxed, might be exhausted, accounts for the omission.

However, it would be ungracious to pass unnoticed two buildings on Australian soil, deservedly the pride of the matron city of Sydney.

These are the Cathedral, 160 feet long, by 62 feet wide and the Hall of the University, 135 feet long, by 45 feet wide, and 71 feet high.

Admitting the first to be highly creditable to the Metropo-

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litan See, it affords an example of the danger of laying out a ground plan without due regard to the probable future wants of the country. When projected, nearly forty years ago, it was considered preposterously and extravagantly large. Events have shown that the natural, though unexpected, expansion of the population has now relatively dwarfed this extremely graceful and tastefully decorated cathedral to what ought to be the size of an ordinary parish church for such a city in such a climate.

The latter is of great beauty, exhibiting in its construction and ornament the exercise of combined learning, taste, and skill, equal to that applied to any hall produced within my knowledge in modern times.* It stands a constant incentive to the people of Victoria to complete their University in a manner consonant with the interests and dignity of the sacred cause of education.

Although we are confessedly surpassed by our neighbours in this particular, you may, nevertheless, contemplate with feelings of justifiable exultation the hall in which we are now met. It is 220 feet long, 82 wide, so that, with the exception of those of Padua, Ypres, and our own Westminster, there is none in Europe enumerated above which exceeds it in length, while it is larger than four of England's cathedrals.

Still, as you recollect, though Westminster Hall, being 238 feet in length, is 18 feet longer than this, it is only 68 feet wide, so that ours of 82 feet is 14 feet wider, and as the walls of our hall will be 55 feet high when carried up as proposed, and as our roof is waggon shaped, with a

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* A table of the length of the three largest halls in the colleges of the Universities of Oxford and Cambridge, shows that of Sydney in advantageous comparison with them in size.

Oxford.			*Cambridge.*		
Christ's Church College Hall,		115 ft.	Trinity College Hall,		100 ft.
Wadham	ditto	70	Clare	ditto	69
Queen's	ditto	60	St. John's	ditto	60

The two largest libraries in each are:

Oxford.			*Cambridge.*		
All Souls' College Library,		198 ft.	St. John's College Library,		150 ft.
Queen's	ditto	123	Corpus Christi	ditto	87

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capacity and lighting power not possessed by the hammer beamed open roof of Westminster, the respective cubic contents of area of each may be thus compared.

Melbourne	...	950,000.
Westminster	...	900,000.

Showing that the Hall of the Melbourne Public Library and Museum, built in the 29th year of the existence of the City of Melbourne, may exceed in size that of the ancient City of Westminster by 50,000 feet.

In addition to this, you see two wings connecting this hall with the front of the Library; each of these measures 230 feet, and when raised to the contemplated height of three stories, is capable of holding an accumulation of treasures of which Victoria may, and doubtless will, make a profitable and a wise use.

The rotunda of the grand staircase, which will be, when finished, probably as handsome as any yet built, not excepting the Scala Regia of the Vatican, measures in diameter 71 feet. It exceeds, therefore, by six feet the great dome of the Pantheon in Paris, one of the most striking objects in that delightful capital, and is as large as the dome of the Cathedral of St. Isaac's in St. Petersburgh—that city of giants —where everything is on a scale of surpassing splendour; a church whose monolithic columns of rose-coloured granite are 56 feet high, nine feet higher than those of the original Pantheon, to which reference has been so often made as one of the noblest monuments of ancient Rome.

This, then, surely is a hall worthy of the objects for which it was designed, well suited to the graceful sociabilities which will usher in the approaching great act of intercolonial hospitality for which it is intended, and for the reception, on the close of the Exhibition, of the works of nature, science, and art to which it is to be devoted.

Surely we ought to acknowledge with gratitude (which, according to a distinguished diplomatist, means a lively sense of future favors) the enlightened statesmanship of our rulers, and the judicious liberality of our representatives, who have generously and wisely combined to convert into indestructible capital, such as the Melbourne Public Library and

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Museum, sums small in themselves taken from the revenue during a few years, without impairing in the smallest degree the efficiency of the public service, or creating one shilling of debt.

Here it may be most appropriate for you to take a prominent part in greeting with a hearty welcome our fellow-labourers in the cause of mutual improvement on which we have entered.

There are many modes in which you may support, many in which you can further the general object of the Exhibition.

A series of Lectures by able men, explaining what invites attention—and what so humble as not to deserve notice—will be given. Your attendance at them will evince your desire to keep pace with the rapidly advancing strides of knowledge.

But let us not concentrate all our thought upon ourselves. Why should not our different guilds invite bands of their brethren of their respective trades to come from the adjoining colonies to visit us during the Exhibition? To exchange ideas respecting the objects of interest common to all of us, to explain practically in language which workmen understand better than Presidents, Commissioners, or Professional Lecturers can do, the excellencies or defects of the different materials on which they have to labour—to impart a knowledge of commodities which may become of immediate exchangeable value. But above all to break down the parochial little-mindedness, which, transplanted into these colonies, exaggerates itself into the contemptible form of colonial jealousy. You may have already anticipated the idea, if so, let me trust that you will carry it out with the like vigour and the like success you have displayed here.

And now a word about yourselves, for in addressing you the lines of Swift admonish me; he says:

> "As when a lofty pile is rais'd,
> We never hear the workmen prais'd
> Who bring the lime or place the stones,
> But all admire Inigo Jones."

It is gratifying to be able to say, that this, which may without ostentation be justly called the successful commencement of

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a great work, has, much to the credit of the active contractors, been finished within the contract time, and happily without an accident of any kind.

The highest commendation which need be given as to the excellence of the workmanship is, that it has satisfied the Architect, whose duty it has been to certify to the Trustees that it is equal to that required by the specification. * *

The durability of the permanent portions of the structure will bear witness to your labour, it may be hoped, for centuries to come.

But other steps will be taken to record the services you have rendered to your country. A roll of the names of the men employed is prepared, classified according to their respective trades, showing the rates of wages paid to them, the cost of materials, and of provisions, tools, clothing, house-rent, and other particulars, during the first six months of this year. To this the contract, transcribed in illuminated writing, will be prefixed. Every man employed will be invited to sign the roll; and let me take upon myself to predict that it will be not the least attractive object at our approaching Exhibition.

You are too sensible and too independent, my good friends, to be imposed upon by the clap-trap nonsense which it is the fashion to deal in respecting the "dignity of labour;" and you know full well that all the glory is not to be monopolised by the robust possessor of the "horny hand." Ready and willing you doubtless will be to concede that the man of thought and of action in his sphere deserves some consideration also—be he as robust as you are, or be he the man of slender frame, the man of the sallow cheek, the hollow eye, the toilwrought brain, the sensitive organisation strained by works as useful materially, and higher in the scale of social utility than the erection of the proudest temple yet built,—he also is entitled to his share of honour for his work in his vocation. Yet, without disparaging the merit of the one, or attempting to mislead by attaching undue importance to the other, it strikes me as likely that some of you will look in after years with satisfaction on that Roll, and that your descendants may feel a not unworthy

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pride in the recollection that you in your day assisted to build this Hall.

Concluding with an earnest hope that before long you may be called together to complete the building so auspiciously begun, that it may be my privilege to address my congratulations to you at no distant day, and bidding you farewell for the present, let me invite you to make the new roof reverberate again and again with three lusty loyal cheers for Her Most Gracious Majesty the Queen.

WILSON AND MACKINNON, PRINTERS, COLLINS STREET EAST.

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ON

THE OPENING

OF

THE SCHOOL OF MINES,

AT

BALLARAT,

VICTORIA.

DELIVERED BY

SIR REDMOND BARRY,

ON WEDNESDAY, OCTOBER 26TH,

A.D. 1870.

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ADDRESS

ON THE

Opening of the School of Mines,

AT

BALLARAT, VICTORIA.

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Address

ON

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OF

THE SCHOOL OF MINES,

AT

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ADDRESS

ON

THE OPENING OF THE SCHOOL OF MINES.

MR. CHAIRMAN, LADIES, AND GENTLEMEN—We assemble this evening to elect directors for the management of the School of Mines for Ballarat. It affords me much pleasure to assist on the occasion. My good fortune has associated me before this with the inhabitants of Ballarat in furthering the cause of voluntary mental improvement. Their zeal, discretion, and perseverance prepared me for the exhibition of similar invaluable qualities in the members of your provisional council: that expectation has been completely realised; and their exertions ably regulated by the good judgment and unwearied assiduity of your provisional vice-president, Judge Rogers, have matured within a short time, and in the face of many difficulties, the plan for the organisation of the school.

My first duty is to thank very heartily the gentlemen who initiated these proceedings for the honour they have conferred on me by naming me the provisional president, and to assure them, as well as the members of the provisional council, that I am very sensible of the distinction. Indeed, these gentlemen have left me nothing more to do now, and but little to say, because as the school has become, in the phraseology of the day, "an accomplished fact," it may be presumed that everything connected with its establishment and maintenance has been thoroughly debated and determined upon. Nevertheless, it is quite possible for an entire community to accept the conviction that it is expedient and desirable to open such a school, and yet it may not present itself to the minds of all that the maintenance in a

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perfect state of efficiency will require something more substantial than their meed of approval of the project.

You may already have considered the advisability of making this a proprietary establishment. Such a system possesses numerous advantages, not the least of which is the direct pecuniary interest which the proprietors have in the good management. This has a talismanic effect on the regular attendance of directors.

You may reasonably expect that the Government will help you, more particularly as in other countries where such schools exist they originate with and are supported mainly at the cost of the State, and especially as you have proposed to give to the Crown the power of nominating six of the members of your council. You may for the like reason look for the support of the seven mining boards. You may further rely, and with reasonable confidence, on the sympathies of many of the general public. Still something more is required. Liberal salaries must be provided for your masters, lecturers, and teachers; a library must be formed; collections of minerals, models, &c., must be made; other things indispensable for the course of instruction must be got together.

You will doubtless see the advantage of founding exhibitions for the encouragement of your pupils: the question of maintenance becomes consequently one which addresses itself earnestly to a much wider circle than the audience who honour us with their presence here to-night.

Although it be not probable that in this community, so forward to avail itself of opportunities to assist in enlightened movements, any will be found actually opposed to the establishment of this school, there may be some persons indifferent to change, and of that timid disposition which shrinks from the responsibility of supporting any novel scheme; or perhaps there may still linger amongst us a few of that courageous old conservative stamp who, long since driven from their outworks by the advancing waves of general education, still hold the citadel in defence of the practical man, and contend strongly that all goes on well enough as it is.

The first will meet us with the inquiry—What is the use of such an institution? When such questions were put to Benjamin Franklin, not unfrequently in the vein of petulant interrogation, depreciating the value of his scientific pursuits, the philosopher replied by asking another, "What is the use of a

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baby?" Indeed, as an abstract proposition it is not easy for any person, except the idolising mother or proud father, to pledge himself prospectively for the eventual utility of any individual infant. Yet Wordsworth has said:—

"The child is father of the man;"

Or, as was sung before by Milton—

The childhood shows the man,
As morning shows the day.

And truly the culture of this scion, which is to be developed into a rational, accountable member of the body politic, clothed with his rights and duties, and his responsibilities here and hereafter, is deserving of our solicitude.

Those who have meditated on the subject have been made uneasy by the growing tendency to obliterate childhood — to hurry on our youth either to drudgery for which the physical powers are unequal, or to occupations which induce an impatience of parental control—an independence for which it is not ripe; and disquieted by the fatal propensity to sharpen youths, who should be boys, into imperfect men. In no regions can uneasiness on this point be more keenly felt, than where the population lives in that state of chronic excitement caused by the search for gold, amongst which speculation is so rife, so stimulating, so contagious. Nowhere can the compensating influences of education be more required to moderate these precocious inclinations; and no kind of education can be devised better suited to calm the juvenile enthusiasm, to steady the volatile, and give a wholesome discipline to the mind, than a sound training in moral and physical science, in mathematics, engineering, geology, mineralogy, chemistry, and metallurgy, which we undertake to teach.

This simple statement would, of itself, suffice to show that the school is one of the best and most useful that the community could project. Your excellent prospectus, which has, it is hoped, had an extensive circulation, declares the uses which this school is expected to serve. Quoting from it, with your permission, it states:—"The object sought to be obtained is the combination of the highest scientific with the most practical training for all men engaged in the enterprise of mining in its various branches—whether so engaged as mining managers, engineers, surveyors, mechanists, working miners, directors, or promoters of companies."

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"Hitherto in this colony no means of scientific education in this most important occupation has been provided. The result has been an enormous waste of capital, time, and labour. Indeed, it may be fairly stated that the present depression in the mining market, and the distrust of mining property as an investment, may in great part be traced to the numerous failures of enterprises either ignorantly entered upon or unscientifically conducted. The scientific education of those engaged in mining pursuits would, it is believed, not merely render gold-mining a safe and generally more productive speculation, but would bring into profitable prominence and activity many branches of mining now wholly neglected, or distrustfully, and consequently unsuccessfully, pursued."

Here, then, is an exposition which completely exhausts the subject, and puts the question beyond the reach of controversy. For institutions, political, social, and educational, there is, as for mankind, an infancy; and you may be congratulated on the rapidity with which this has emerged from its swaddling-clothes. The sum of £600, wanted to enable you to commence operations, has been subscribed. The Government has so far recognised your movement as to grant you a lease, at a nominal rent, of the house in which we are met, formerly the building in which were held the sittings of the Supreme Court. It has been repaired and adapted to the requirements, and you are now ready to set to work.

If there be amongst us any indifferent to the movement on account of its novelty, to them may be said, with all deference for striking on so low a chord—You cannot afford to be listless—your self-interest demonstrates the imperative necessity for action. Your calling, whatever it may be, is so interwoven with, so dependent on, the mining for gold, which has enlisted so large a part of the population of the district, that the question is brought home to you in a serious light. You cannot decline to move on with the times.

Only sixteen years ago, when the valleys around this spot were crowded with upwards of 40,000 stalwart diggers, working amidst the alluvial drifts with an energy almost incredible, an admonition was given, which sounded prophetic, and was consequently disregarded; yet the verification of this has come upon us in our generation with a startling and unpleasant truthfulness.

Many a one of you, when consulting the author of *Siluria*, for guidance in your operations, to which his profound and philosophic

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investigations have imparted such pre-eminent value, may have paid but scant attention to the conclusion of the sixteenth chapter. Let me read it to you. Speaking of these alluvial workings, he says:— "Now, as every heap of these broken auriferous materials in foreign lands has as well defined a base as each gravel-pit of our own country, it is quite certain that hollows so occupied, whether in California or Australia, must be dug out and exhausted in a greater or less period. In fact, all similar deposits in the old or new world have had their gold abstracted from heaps whose areas have been traced, and whose bottoms were reached. Not proceeding beyond the evidences registered in the stone-book of nature, it may be therefore affirmed that the period of such exhaustion in each country (for the deposits are much shallower in some tracts than in others) will, in great measure, depend on the amount of population and the activity of the workmen employed in each locality. Anglo-Saxon energy, for example, as applied in California and Australia, may in a few years accomplish results which could only have been attained in centuries by a scanty and lazy indigenous population, and *thus the present large flow of gold into Europe from such tracts will, in my opinion, begin to diminish within a comparatively short period.*"

These italics are his own. You may answer whether undue emphasis be thus given to the passage. What is the obvious moral to be drawn from this pregnant sentence? Does it not show that what has occurred on this spot within this short time, under our own eyes, proves amply that, in this quarter at least, the era of the cradle and the tin dish has already passed away into an antiquity as dim and distant as the age of Tubal Cain; that the present epoch of deep leads to reach the banks of what were at some remote geological period superficial streams, or to follow out, what may be of still more or less ancient formation, gold-bearing veins of quartz, demand agencies wholly different from those which hitherto sufficed; that while you will still rejoice to possess the help of the miner's brown arm, the time has come when the calculating and inventive brain and the cultivated intelligence must play their part; and that you now must enlist higher forms of sagacity, employ auxiliary forces, and that these forces must be directed to suit the altered circumstances which have arisen.

But our old and valued conservative friends, who conceive that new-fangled ways and contrivances are all weariness and vexation

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of spirit, and who rest their faith on the proverbial "practical man," will allow me in all amity to remind them that the practical man does not want to be pampered and coddled, to be nurse-tended and protected after their fashion. Self-training, practical experience, hard-earned knowledge, and other similar expressions, worn threadbare long since, are captivating to some. Nevertheless, the self-trained practical man who rises to eminence—after all, one in many hundreds of his order—is the last person in the community to be seduced by them. He knows that nature's precepts are the same as they have been before all worlds, and that while none can claim a monopoly in them, no one can appropriate them without a long and earnest servitude to acquire them. He recognises the truth announced by the poet's description of gravitation:—

"That very law which moulds a tear,
And bids it trickle from its source,
That law preserves the earth a sphere,
And guides the planets in their course."

He knows that he has had to earn his knowledge by studying the same laws of nature and physics, and gaining the same general information which others do who have attended schools and universities—a privilege denied to him. He feels that he has had to struggle alone under a thousand discouragements to reach by rugged and circuitous tracks the same goal; that he has been like one trying to decipher unaided a secret writing, who has had to compare symbols in different positions and under different combinations, obliged to conjecture many a time and oft what their meaning may be, until, after a multitude of fruitless experiments, he comprehends their separate and relative significations. No such man would decline the help of teachers familiar with every branch of science he desires to master, or the use of a library, collections of properly-classified minerals which you will doubtless cause to be assembled, or of apparatus to illustrate for him at once problems, by which he has been for a long time perplexed.

Apart, however, from this, let us view the matter in a broader light, and strike a key more in consonance with the liberality of sentiment with which you wish this matter should be treated. When we reflect on the distinction between science which collects principles, and art which applies them, we may acknowledge the force of the more rational persuasion of enlightened men of every

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age, that theory and practice, instead of being hostile, are only different phases of the same form of thought, that to impose on them the ban of celibacy is for practical purposes the most impracticable of things, and that they should be allowed to continue undivorced, for ever bound together in indissoluble bonds of holy matrimony.

While discussing this, your attention may be called to the opinion of Robert Stephenson. He was, as you know, son of George, father of railways, who, when the unknown brakesman of Killingworth, disputed with Davy of world-wide reputation the priority of invention as well as usefulness of the safety-lamp, and who stinted the indulgence of his days of sparingly-requited labour in order to give his son the best education to enable him to aid his own acknowledged deficiencies. Writing from South America in 1825, whither he had been sent to superintend the working of gold mines at St. Anna, he says:—"Practical men are certainly to be esteemed as such, but I am far from attaching the importance to them which our masters appear inclined to do. Indeed, in the working of gold and silver in veins in this country it is absolutely essential that theory and practice should be united and go hand-in-hand."

It is difficult indeed to know how to repress this natural proclivity to innovate, or by what rigour to restrain this stationary mediocrity so erroneously attributed to the practical man. He, himself, rises in rebellion against the favourite code prepared for him, for no sooner does he allow his genius to soar above his mechanical occupations, and to speculate on some improvement on his servile toil, than he becomes, himself a theorist—one of the obnoxious body of philosophers looked upon as idealists or dreamers.

Is it not manifest then that when a knowledge of mathematics and mechanical principles affecting the direction and pressure of forces, an ability to estimate the strength, the elasticity, and other properties of materials, with a view to economy, convenience, safety, and durability, has been gained by a man before he enters on the practical application of the principles of construction, and sets himself to build a house, &c., he will have an immeasurable superiority over the one whose performances have been for years chiefly imitative, who has not been able to find time to learn, or find others with leisure or inclination to teach him those principles calculated to simplify or expedite his unvarying handiwork, but who has been obliged to rest on the actual experience of his own working hours. Might we not as well expect to find a

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person skilled in the art of navigation who is ignorant of the science of astronomy; or of mensuration, who knows not geometry; or of logic, who was unacquainted with the science of reasoning; as an engineer, who had not mastered the science of mechanics; or one able to direct the search for, and profitable working of minerals, to whom geology, chemistry, hydraulics, and other cognate sciences were not familiar.

The question is sometimes narrowed as to what are the best means of acquiring technical proficiency, and it is asserted that the practical details of civil engineering may be best learned by pupils in the field, and in the offices of engineers engaged in the execution of extensive works—in fact, dealing with the professional man as with an ordinary tradesman, and insisting that he should be taught as is the apprentice to the shoemaker or hatter. Now, we are not obliged to admit or deny this proposition, for it embraces only one portion of the general subject, and the conclusion drawn from it, that private tuition, under an exceptionally favourable state of circumstances in both master and pupil, is, or may be, that best calculated to ensure a certain proficiency, is not the true issue. What is required is—not a partial adept in some one branch, or a few branches of work, but a man with comprehensive learning, which embraces the wide range of philosophic theory, the precepts of which invigorate the understanding, and keep him from the perpetual blunder and mischance into which the practical empiric is so prone to fall; and who, in addition to this, can apply those precepts with readiness and aptitude. Yet even on this point it may be well maintained that isolated pupilage amongst seniors of different dispositions, engrossed with their own independent responsibilities, more prompt to neglect or chide than to instruct, cannot be so congenial to the young man as the association with his fellows of the same age, all mutually bringing to bear on each other in honourable rivalry the knowledge which they daily acquire. And as it is in a great degree a parent's question, the school presents the protection of superintendence, the exercise of moral restraint, and the absence of temptation to idleness and dangerous self-indulgence, not so well insured against in the early emancipation of the other system.

But what testimony can be more eloquent than the lamentations of our most distinguished practical workers, at their not having been blessed with the benefit of education in early life? What more

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touching than their struggles, what more worthy of respect than the spirit of enquiry and perseverance by which they were animated? What more convincing than the care they took and the expense they incurred to secure for their children that early instruction the want of which was by them so feelingly deplored? However profitable it might be to exhibit instances of this, displaying in almost every variety of form, intelligence, strength of character, firmness of purpose, frugality, intense sensitiveness, and many a manly virtue—such would be more suitable for another occasion.

It is not to be imagined that those invited to give their support to this institution are to be stirred solely by appeals to self-interest, or by an exposition of the fallacies of obsolete prejudices. Members of an intelligent community when in search of reasons to guide them at such a juncture will look back upon the experience of the past to guide their actions, forward for a motive for their conduct.

Now, there is in history, perhaps, nothing more deserving attentive consideration from the point of view we are now regarding it than the astonishing impulse given to all the industrial and mechanical arts since the beginning of the present century. That this is to be ascribed in some degree to the increase of population and the very augmentation of wealth which reduplicates itself, is true; nevertheless, far the greater portion of the prosperity is due to the improved means of intercourse, the discoveries painfully elaborated by means of the singular intellectual activity of the age, the spirit of inquiry, and the bold and persevering researches of scientific men. While nothing is so truly surprising as to observe the rapidity of development of several of these grand implements of pacific revolution swelling from the tiny nucleus which was seen on our own horizon to the gigantic proportions which they have already assumed.

Chemistry, enfranchised from the superstitious trammels of alchemy, had moved forward for some time with halting steps and slow; but it is within our own day, so to speak, that she has enlisted the services of those utilitarian workers, unnecessary to enumerate by name here, who investigated the mysteries of nature, evolved from inert matter a host of elementary substances, the existence of which as such was unsuspected before, capable of forming new alliances, and in simple compound or allotropic forms delighting us by the unexpected nature and energy of their action, their usefulness, and their beauty. Operations in most of the industrial arts, including the cul-

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tivation of the soil, where now conducted upon true principles of economy, are largely indebted to the discoveries of chemists, and it is well known that some, productive of no inconsiderable gains, could not be worked profitably but for the appliances thus obtained. At the same time, in the more speculative walks of science, it is with her help that astronomers, now learned in the laws which govern the composition and relations of the rays of light, and using the spectroscope, are enabled to determine the primary constituents of planets which lie beyond the limits of space reached by the best optical instruments employed by their immediate predecessors.

Electricity, but recently deemed a pursuit only for the amusement of the curious, has been enlisted as an additional servant, obedient to man's behests, and exhibits its tractability to perform offices of the most various kinds. The years 1793-4 witnessed the contention between Galvani and Volta,* which established the distinction between animal and contact electricity, and now we hear of electro-magnetism, diamagnetism, magneto-electricity, magno-crystallic action, diamagnetic polarity, and hundreds of other wondrous things which wait on Dr. Tennant like attendant Ariels on the magician Prospero. The electric light irradiates the blackness of darkness with its peculiar effulgence. The telegraph wires, conveyed by land and under the sea for hundreds of thousands of miles, flash messages everywhere—already almost round the globe—a circuit which it is expected will be complete in less than three years; and powerful magneto-electric machines worked by steam generate heat which yields a current of electricity used to produce a chemical change in the precious metals, and deposit gold and silver on moulds with a delicacy and precision incapable of achievement by the hands of the most practised goldsmith.

Steam, substituted for the uncertain powers of water and of wind, and for the muscle, sinew, and nerve of man and beast, saved from waste, or called from a dormant state into existence as a labour agent, and directed at will, now accomplishes more work than could be performed by the united operation of the adult male members of the human race; and the daily growth of perfection in the construc-

* Galvani attributed the contraction of the muscles of the frogs' legs to animal electricity. Volta accounted for the phenomenon by the contact of the heterogeneous metals, zinc, &c., with the muscles. Galvani replied by showing that the contraction may be produced without metals. Volta retorted by producing electricity *without frogs*.

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tion of machinery, as also the adaptation and adjustment of each kind to its special duty, so augments the power of production, in a ratio of such velocity, as to set completely at defiance the sobriety of calculation of what it may reach with the next fifty years.

Or take the advance of engineering science in the improvement of means of locomotion, from the canals of Brindley, Rennie, and Telford, to the railroads which now traverse continents, scale mountain ranges on gradients, within our memory deemed impracticable,* perforate Alps through tunnels excavated by methods of applying the forces of water and of air, as new as they have proved effectual. It may be observed incidentally that this process is now being worked at the Tangil mines of Gipps Land. Also to cross straits and rivers by such bridges as those of Menai, of Montreal, of Friburg, or Niagara, or valleys by such viaducts as the Indre, Nogent Sur Marne, or of Congleton, or our own highly creditable Moorabool, only 66 feet shorter than the great wrought-iron tubular Britannia bridge.†

Or consider the progress made in providing for means of accelerated intercourse on the ocean, the highway of nations, from 1802, when the first steam-tug was launched on the Clyde, and compare her lilliputian apparatus with the engines used in many a Cornish mine, or those which worked the pumps, with cylinders 144 inches in circumference, employed to drain the lake of Haarlem. Or contrast the first steam passenger vessel, the "Comet," which plied on the same river in 1812, with the "Great Eastern," 619 feet long, or 87 feet longer than St. Peter's, at Rome, registering 18,914 tons, with a capacity of 25,000, built of iron, a species of engineering Cosmos, containing within herself an example of almost every improvement in construction known when she was built, moving through the water under two independent systems of propulsion, paddle-wheels and screw, of the power equal to the combined strength of 8400 horses, as large, in fact, as 350 vessels of the size of that in which Christopher Columbus ventured to cross the Atlantic.

A leap like this is almost as great as was accomplished in naval

* The Semmering between Gratz and Vienna, 1 in 40; the Bhor Ghaut, between Bombay and Poonah, 1 in 37; the Blue Mountains, between Sydney and Bathurst, 1 in 30.

† 1. Menai, 570 feet long, — feet above the water; 2. Britannia, 1488 do., — do.; 3. Montreal, 6592 do., — do.; 4. Friburg, 880 do., 180 do.; 5. Niagara, 800 do., 350 do.; 6. Indre, 2463 do.; 7. Nogent S.M., 2722 do.; 8. Congleton, 2870 do.; 9. Moorabool, 1426 do.

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architecture in three thousand years, from the launching of the good ship "Argo"[1] to that of the "Comet."

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[1] The Argo is described as a penteconteros, propelled by 50 oars; she carried 50 heroes, as some authors say, or 100 according to others. The pseudo-Orpheus* sings, that after Jason had taken the golden fleece he passed up the Tanais, and the ship was transported by land to the head waters of a river which flowed into the Baltic. Hence she made her way through the German Ocean by Ireland to the Straits of Gibraltar, and up the Mediterranean to her port of departure. She must thus have been of light construction, and a tolerably good sea-boat. Others† tell us she returned by the Southern Ocean, which, to meet the exigencies of that version, flowed from the Red Sea across what is now the dry land of Northern Africa. Prose authors,‡ to whom of course the least credit is given, suggest as likely that she came back the way she went. Unravelling the meaning of traditions, respective events said to have happened about a generation before the siege of Troy, may amuse antiquarians and perplex historians, but is not very profitable to us. Still you may be detained for a moment, as one of the interpretations of the objects and results of this expedition goes to show the antiquity of one of the contrivances employed in gold-washing; and that it has been perpetuated by the like means and by artificial substitutes amongst various people, separated from each other by distances of time and space. We may suppose that the people of Colchis were in the habit of collecting the particles of fine gold washed down from the Caucasus by placing sheepskins in the stream, as is now done in South America by using ox-hides for that purpose; or as it is done daily at every quartz claim here by placing baize or blankets on your shaking-tables or ripple-boxes, to the pile or filaments of which the laminated gold adheres. The strictness with which they preserved the secret, and the jealousy with which they protected their treasure, may account for the fable of the golden fleece guarded by dragons. Chrysomallus, the gigantic ram, engendered by the god Neptune and Theophane, daughter of Brisaltis, King of the Island of Cremissa, may then be sobered down to a sagacious old gentleman who combined the operations of sheep-farmer and alluvial digger—who depastured his numerous flocks on the banks of the Phasis, between Trebizond and the Straits of Kertch; and turned his fleeces to a double purpose—subject, nevertheless, to the royalty imposed by King Aectes; that Jason, a buccaneering young Greek, invaded the country, and contrived to outwit the monarch, eased him of his two chief staples of export, wool and gold, eloping at the same time with his daughter, the fair enchantress Medea. Another instance of the similarity of the method of mining in ancient times and in modern days, when resort is had to simple means unaided by scientific appliances, is furnished by Monsieur Caillaud, the persevering mineralogist, who recently discovered the famous emerald mines of Mount Zeborah, in the isthmus which separates the Nile from the Red Sea; and confirms in all respects the testimony of Strabo and other writers. Worked during the dynasty of the Ptolemies more than 2000 years ago, excavations following the veins of mica, talc, and schist, were driven for many hundred yards into the granite mountain. Subterranean canals, huge causeways, and other massive structures, show on what an extensive scale, and on what rude and uninformed principles, the work was carried on. It would seem that the operations were suspended, and the miners withdrawn suddenly; from what cause is unknown (not improbably from a panic fear of ghins, ghouls, or evil genii entertained by the superstitious workmen), for ropes, baskets,

* Of this way of thinking are also Timæus and Seymnus of Chios.
† Pindar, Pythic Ode 4.
‡ Herodotus and Diodorus Siculus.

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No attempt is made in this cursory retrospect to present to you anything not known to all of you. My desire is to suggest by this brief recapitulation an idea which arises out of it. Each of these sciences, with many others to which no allusion has been made, are the willing handmaidens of the art of mining. Knowledge of the suitable locality in which to sink your shafts, and of the direction in which to push your drives—how to support them with due regard to economy and safety in working them, to drainage, lighting, ventilation, and the precautions for the preservation of health and life, the expulsion of foreign substances which detract from the value of the ore and interfere with the direct action of your quicksilver on gold, or of the fluxes and reagents employed for refining other minerals, even the means of speedy carriage to the port of departure and transit to the ultimate market—concerns you all; and though it may not enter into the calculation of the gentlemen who with such eagerness ply their vocation in the sale of scrip at your "Corner," ignorance, or the misapplication of ill-digested science in the elaboration of any one of the stages of the lengthened series of operations, may make a sensible difference in the actual tangible amount of the dividend promised when you associate yourself with the latest "floated" company, professing to be conducted on the most approved scientific principles.

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levers, grinding-stones, vases, lamps, tools, and utensils, in all respects like those in use by the Arabs of the present time, were found lying about as though the owners had retired five minutes before these implements were found.

The Latin version of the portion of the *Argonautica* of the pseudo Orpheus relating to this (*inscrt. auct.*), is given:—

Inde sub Arctois angusto rapta meatu,
Finibus oceanum versus prolabitur Argo,
Defessi noctesque novem, totidem quoque soles
Linquimus hinc atque hinc ignotas nomine gentes,
* * * * * *
Atque ubi diva diem jam clarum Aurora revexit
Rhiphæas valles attingimus, inde repente
Prosilit angusti puppis per littora ponti,
Oceanumque intrat, Saturnius ipse vocatur
Pontus Hyperboreis à gentibus, et mare mortuum,
Unde etiam lethum fugiendi nulla fuit spes,
Ni puppim validis Ancæus viribus actam,
Innixus pulchra temonibus arte dolatis,
Dextra coëgisset cursum per littora ferre.
* * * * * *
At multa Ancæus temonem dirigit arte,
Insulaque ante omnes offertur Iernis, et Argò
Insequitur metuens atram non stulta procellam,
Velaque franguntur.

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We have glided so imperceptibly into the enjoyment of many advantages, comforts, and luxuries, the offspring of these discoveries —we have familiarised ourselves so complacently with the results— that we do not fatigue our minds to investigate how these results have been brought about; nor do we reflect as attentively as we should do as to what the future of this country is to be, and how those who succeed us must acquit themselves.

Our most accomplished geologists assure us that the area of auriferous drift is far from having been yet explored; that the extent of gold-bearing rocks is wholly unknown; that the depth to which they may be profitably worked is still undetermined; that unmistakable indications announce the presence of other minerals of no mean value; while the natural products already so abundantly cultivated, and those capable of bearing acclimatisation, display unbounded resources to employ industry, and for manufactures demanding a higher order of scientific and technical instruction than has been hitherto available for their judicious development. For it is not by wrestling against the inflexible laws of nature, which compel the industry of man to conform to the conditions of soil and climate, and the limits of his own knowledge; nor by ill-advised competition with the capital of older communities, employed under circumstances which give it an overwhelming superiority; nor by a contest with the stubborn principles of political economy, that we can expect to establish the permanent prosperity of our adopted land.

We are not, even in our time, satisfied to import the discoveries of others, and to invite the man of science and the skilled artisan to direct their operations. Australia can point with a modest satisfaction to the invention of Osborne in photo-lithography, and the test for blood by Dr. Day; to the cure for snake-bite by Professor Halford; to the method of removing pyrites, that inveterate enemy of the metallurgist, as well as the native alloys from gold, and toughening the metal by the use of chlorine gas, by Mr. Miller, of the Sydney Mint; to the scientific preservation of the meat of our redundant flocks and herds, so largely exported; and also to many others, mention of which would detain you too long, the omission to specify which will be pardoned, and not deemed invidious by the able and zealous men to whom the community is so much indebted.

Far be it from me to depreciate the benefits to be derived from sitting at the feet of those great masters who instruct mankind in

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Europe, or to underrate the incalculable advantages to be gained by travel in expanding the mind, making it receive readily, almost involuntarily, impressions of the most improving description. Still, it is not to be supposed that parents will sever themselves from their children, or that they can afford to incur the risks and expense of educating their sons in another hemisphere, when it is possible to procure for them, all things considered, a good training in this busy human hive; where, in the midst of mines, factories, and workshops, with gifted operatives in every branch of every trade at hand, opportunities for the technical illustration of every department of theory exist, such as it is rare indeed, if not impossible, to find assembled in any other spot in such close proximity. We should not, then, ungraciously underestimate the faculties of our young men, and deem them incapable of holding their ground with their own relatives resident in the countries from which we have come. We should not act towards them in a manner at once ungracious and unjust, by denying them means to prove their ability and to try their constancy.

As the ranks of the learned professions become more densely filled, other sources of equally useful and honourable employment must be sought for those who come after. Your surveyors, your engineers, your architects, must be called into existence here, and the time will come when Victoria may, with pride, address to her own sons the mandate—

> "Bid harbours open, public ways extend,
> Bid temples worthier of God ascend,
> Bid the broad arch the dangerous flood contain,
> The mole projected break the roaring main,
> Back to his bounds their subject sea command,
> And roll obedient rivers through the land."

Let those, then, who desire that such things should be, come to the front, and with good will and open hand support your school.

It is not my intention to delay you by dilating on the detail of the course of study to be pursued here, already mapped out with much discernment from those of the great schools of Europe, our safest guides. You would not, however, excuse a neglect to acknowledge gratefully the obligation we are under to the eminent geologist, Sir Roderick Murchison, the venerable director of the Jermyn-street School of Mines, for the advice with which he has kindly favoured us, and the donation of books which form so acceptable a contribution to our

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library. That he should express, as he has done, a lively interest in the formation and success of this school is natural, when so many references are being constantly made by him to the geology, natural history, and peculiar characteristics of this portion of the globe. In his address to the Royal Geographical Society in May, 1868, he made especial allusion to the subject when passing on Sir Charles Lemon (a name honoured by every true Cornishman) a well-deserved eulogium, of whom he says:—"In a word, no man of my time was ever more generally respected and beloved;" and adds—"in the year 1846, being president of the Royal Geological Society of Cornwall, he invited me, his guest, to attend an anniversary meeting of that body, and say something which might give encouragement to the tin-miners, who were at the time in a suffering state, and many of them out of work. It was then—referring to what I had been speculating upon in our own society and at other places in the two previous years, as to the auriferous character of the Australian rocks when compared to those of the Ural Mountains—that I ventured to counsel these tin-miners to emigrate to Australia and dig for gold. Some of them took my advice, and in 1848 I was in possession of small specimens of ore sent home by them. Thereon I took more courage, and warned her Majesty's Government of the great event which was about to be fulfilled. I will only add that the so mis-called discovery of gold, *i.e.*, the diggings on a profitable scale, were not opened out till 1851, and that my much earlier letter to the Colonial Secretary is printed in the Blue Book on Gold."

Having, as it is my apprehension, already trenched too largely on your indulgence, you will allow me, in conclusion, to add that there is one principle which cannot be too forcibly recommended to you, in the value of which the rational concurrence of the council may be expected. It is, that the standard of the education to be given in the school be fixed sufficiently high at first, and kept up, unrelaxed by a too ready compliance with ill-judged solicitation or remonstrance. You are aware that the teaching is to be special—of a nature to unfold the most active faculties of the pupil's mind—not by dwelling exclusively on the ideas of others, but by enlarging the circle of his own thoughts, and inculcating an habitual self-reliance. The teaching must therefore be thorough and honest, or it may not only be useless, but mischievous and dangerous.

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We charge ourselves with the training of young men, to whom may eventually be entrusted the expenditure of considerable sums in preliminary inquiries and trials, on which will depend the investment of capital (to form, perhaps, in some instances, the source of maintenance for persons who cannot labour), the preservation of property liable to injury or destruction, the winning of minerals under circumstances of uncertain and unexpected danger, and who will consequently be responsible for the safety of the lives of many human beings. Such training is different in quality from that in other schools, in which the precision exacted by physical science is not enforced. There are no degrees of mathematical accuracy—the results must be correct, or they are wholly vicious. Moreover, the admixture of subjects, practical and theoretical, to be taught here will have a peculiar use in enabling you to resist any such attempts—the pupil's hand will be busied in forwarding the improvement of his understanding. When employed in tracing, fitting, moulding, verifying, and putting together the parts of machinery, in making drawings, working plans, &c., calculating quantities, he will have to think out the process by which he directs the instruments he uses, in a manner very different, on the one hand, from committing to memory languages or the theories of philosophers; on the other, from the traditionary practice of the hereditary artisan. Facilities will be thus afforded for testing the soundness of his work at every stage of his advance. This will, to a great extent, correct the unwholesome system of "cramming." This will show those who imagine that loading the memory with dates, events, maxims, and rules will suffice, that something beyond a superficial varnish of accomplishments is expected here, and that, as when they become professional men it will be required of them that they will not permit vamping or scamping of work to pass with their approval, so it is their duty now to prepare themselves for the discharge of those responsible functions by a faithful devotion to the course of teaching laid down for them here.

Another feature in this school fortifies the position you may assume. There will be, as it strikes me, something eminently agreeable to the well-constituted mind of a youth who is to attend this school, to behold the full-grown man—perhaps father of a son of his years—applying himself after the exhausting labours of the day to the drudgery of self-improvement. If anything can be conceived

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more likely than another to arouse the indolent, to abash the trifler, to restrain the irregular, to encourage the diffident, to stimulate the ardent, it should be such a prospect—manhood voluntarily placing itself under the ferule, and labouring by the voluntary cultivation of the intellect to make itself more useful, more trustworthy, more respected. If there be anything more than another more likely to instil into your young men that reverential feeling towards their parents, and to cherish a due regard for the feelings, the wishes, and the affections of their seniors, without which virtues whatever be the material wealth of the country it will not be fit to live in—it is this; if there be anything more likely than another to make them sensible of the wisdom of your strictness and the justness of your severity—it is this. Better for them that our young men should be warned betimes of their inaptitude for the profession they seek to join, by reason of want of capacity, or power of sustained attention which is to qualify them, so that they may fit themselves for some more congenial occupation, than that they should be permitted to lounge through your school empowered to practice on public credulity under the colour of your certificate.

When Napoleon I. decreed that a university should be established, he proclaimed, "The Emperor wants a body whose teaching may be free from the influence of the passing gusts of fashion—a body that may be kept moving even though the Government be lethargic." It is not for us in the modesty of our humble efforts to promulgate such a manifesto; but we may remind ourselves that all who feel an interest in the success of this school, and look forward hopefully to its sending out in fullness of time a band of well-educated professional men, expect that the standard of proficiency once established will not be lowered without substantial reason; also, that such improvements in the system as may be suggested by the intelligence of others, or dictated by our own experience, be adopted without delay. The cautions reiterated on this head by many persons competent to offer unprejudiced comments have been numerous; to multiply quotations would be superfluous, when the principles accord so completely with common sense. It is right, therefore, at the outset, to dispel any expectation which may be entertained by the pupils that the standard of qualification is to fluctuate according to the scale of their shortcomings. The announcement will be the best means of inspiring them to do what is demanded of them.

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It is well also to remember that in cases of imperfect training under a system tolerated by supine administration and weak concessions, the discredit will not fall exclusively on the pupil: much will be expected from our teachers, much must be left to our examiners, in whose firmness and discrimination faith must be reposed—a faith which ought not to be lightly shaken. Much will depend on the council of directors you proceed to elect to-night. If it be not unbecoming me to say so, the assurance given by the ability with which the provisional administration has been conducted, justifies me in expressing a belief that the gentlemen who are to become the objects of your choice will enter office convinced of their responsibility, and determined to do their duty.

If, then, these precautions being taken, our efforts be crowned by the success we invoke—to the reputation for enterprise and energy in acquiring wealth, as well as for liberality in applying it to the worthiest uses, which was won by your Maiden City before the recently-conferred honours were bestowed upon her, you will add the credit of founding an institution calculated to meet a peculiar want of the country and of the age. You will thus elevate her to the level of those venerable seats of learning which, though wanting in many of the natural sources of material prosperity which exist on the surface of the soil around us, and altogether destitute of those found in the earth beneath our feet, are rescued from geographical insignificance and obscurity, and deserve an honourable pre-eminence by reason of the encouragement they afford to literature and to arts of that becoming order which lend a grace to life.

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LECTURE

ON

MUSIC AND POETRY,

Delivered at the Melbourne Mechanics' Institution, on Wednesday, October 24th, 1849, by

REDMOND BARRY, ESQ., BARRISTER-AT-LAW;

And Read before the Members of the MELBOURNE ATHENÆUM, *on Monday, December 17th, 1872, by*

SIR REDMOND BARRY.

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LECTURE

ON

MUSIC AND POETRY.

"For eloquence the soul, song charms the sense."
Par. Lost, II., 556.

"Give me some music—music, moody food
Of us that trade in love."
Antony and Cleopatra, Act II., S. 5.

"Music, Ho! music, such as charmeth sleep."
Midsummer Night's Dream, Act IV., S. 1.

"Preposterous ass! that never read so far
To know the cause why music was ordained.
Was it not to refresh the mind of man
After his studies or his usual pain?"
Taming the Shrew, Act III., S. 1.

"Vacuæ carmina mentis opus."
Ovid, Sappho to Phaon.

LADIES AND GENTLEMEN—Some time since I had the honour of addressing, to an audience assembled in this Hall, a Lecture on that department of the "Fine Arts" which embraces Architecture, Sculpture, and Painting. I now propose to offer for your consideration some remarks upon Music and Poetry, which will complete the introduction of the subject.

This distribution and separate examination may be considered not inappropriate, inasmuch as the ideas respecting the different branches presented for investigation are conveyed to the mind through distinct organs; and as the impressions forced upon us on beholding a stately edifice, an agreeable picture, or a life-like statue, are originally produced by the reflections on the retina of the eye, so the effects generated by the performance of a thrilling strain of enlivening music, or the luxurious melody of harmonious sounds, as

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well as by the recitation of sonorous numbers, or of affecting verses, owe their origin to the pulsations on the tympanum of the ear.

In this I may be, perhaps, restricting too narrowly the channel of communication between the mind and this external sense, for though the accurate may insist that the impulses caused by hearing pleasing music and excellent poetry pass solely through the medium of the ear, we are all conscious of having experienced on such occasions a dilatation of the frame, a sympathetic vibration of the system, as if the body were an instrument drinking in the sounds at every pore, and we may be induced on reflection to admit that the poet uses no hyperbole when he exclaims—

> "I was all ear,
> And took in strains that might create a soul
> Under the ribs of death."

As sight and hearing are produced by operations of the eye and ear less perceptible to feeling and less obvious than those which employ the other senses, and, as it were, without any palpable resistance by or pressure on those organs, and as they minister more extensively and effectually to the intellectual portion of man than the other external senses, they are well deserving of the poetic epithets and attributes by which they have been distinguished.

One has been appropriately designated "the window of the soul;"* and who can remain insensible to the lamentations of the illustrious Milton for his loss of sight, and his pathetic and eloquent mourning over a privation to him so severe ?† or who is unaffected by the earnest pleading of Prince Arthur, to which the ruthless Hubert yields at last ?‡

The other has been styled by Sophocles "the fountain of

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* Animi fenestræ oculi et omnis improba cupiditas per oculos tanquam canales introit.—*Salvianus, de Providentia*, Lib. 3. Burt. *Mel.*, Part 3, S. 2., M. 3, Subd. 3.

† *Paradise Lost*, Bk. III. *Samson Agonistes.*

‡ Shakspeare, *King John*, Act IV., Sc. 1.

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hearing."* Shakspeare, indeed, employs a somewhat homely expression when he causes Imogen to say to Pisanio, using a like figure of speech—

"Love's counsellor should fill the bores of hearing
To the smothering of the sense."

Cymbeline, Act III., S. 2.

Yet who is there who is not touched by the purely poetical delicacy of the description of deafness, one of the most distressing afflictions of old age, when it is said by the Preacher—

"The daughters of music are brought low."

Eccles. xii. 4.†

Distinct senses being appealed to by the different branches of the Fine Arts, it is worthy of the subject to consider in what manner these respective arts affect the mind. It must be remembered that language, the vehicle for the communication of ideas, is twofold—natural and artificial. Every animal, in common with man, is endowed with the former, to enable it to express, in an intelligible manner to its own species, such wants, sensations, or desires as are necessary for its preservation or the continuance of its kind. It is both voluntary and involuntary, and not merely vocal, but consists also in assumed or spontaneous postures or gestures, as well as certain uncontrollable indications.

Thus Pity, while it sheds an air of benevolence on the countenance, fills the eye with a sympathetic humidity; ‡

* Œdip., *Tyr.*, 1387.

† For a still more remote allegorical expression see Hosea xiv. 2—"Take with you words and turn to the Lord; say unto him, Take away all iniquity, and receive us graciously. So will we render the calves of our lips," *i.e.*, sacrifice of thanksgiving. There is also a beautiful image of the same nature in Isaiah lvii. 19—"I create the fruit of the lips," *i.e.*, speech.

‡ "Les Larmes sont le langage muet de la douleur."

VOLTAIRE, *Phil. Dic.*, in Voc. "Larmes."

"Speak, then, for speech is morning to the mind,
It spreads the beauteous images abroad,
Which else lie furled and clouded in the soul."

DRYDEN'S *Duke of Guise*, Act II., Sc. 1.

Mollissima corda
Humano generi dare se Natura fatetur, [Quæ

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Tears betray the extremes between the most rapturous joy and the most poignant grief; while Appetite, arousing a sensual craving, overcasts the face with an animal glow, and supplies a redundant moisture to the lips. Fear strikes upon the features a hue of pallor—

> "Nay, guiltiness will speak,
> Though tongues were out of use."
>
> *Othello*, Act V., S. 1.

Modesty calls up a mantling blush upon the cheek—

> "Heaven kindly gives our blood a moral flow,
> Bids it ascend the glowing cheek, and there
> Upbraid that little heart's inglorious aim
> Which stoops to court a character from man."
>
> YOUNG, *Night* VII.

Shame suffuses it with a deeper and incarnate dye; by the restless movements and ever-changing positions, the quivering lip, the faltering tongue, the wandering and unsteady eye, guilt stands confessed in self-convicted deformity.

And as these natural signs form an universal language, which no diversity of speech or difference of race can confound, the humble or abject tone of supplication, and the acute accent of pain, the attitude or aspect assumed to inspire confidence or create distrust, to express humility or arrogance, to denote reverence or detestation, are as well

---

> Quæ lacrymas dedit; hæc nostri pars optima sensus.
> Plorare ergo jubet causam lugentis amici,
> Squaloremque rei, pupillum ad jura vocantem
> Circumscriptorem, cujus manantia, fletu.
> Ora puellares faciunt incerta capilli.
> Naturæ imperio gemimus, cum funus adultæ
> Virginis occurrit, vel terra clauditur infans,
> Et minor igne rogi.
>
> *Juv. Sat.* V., 131.

Omnis enim notus animi suum quemdam a natura habet vultum et sonum et gestum, totumque corpus hominis et ejus omnis vultus omnesque voces, ut nervi in fidibus, ita sonant, ut a motu animi quoque sunt pulsæ. Nam voces ut chordæ sunt intentæ, quæ ad quemque tactum respondeant, acuta, gravis, cita, tarda, magna, parva; quas tamen inter omnes est suo quæque in genere mediocris. Atque etiam illa sunt ab his delapsa plura genera, lene, aspertum, contractum, diffusum; continenti spiritu, intermisso, fractum, scissum; flexo sono attenuatum, inflatum. Nullum est enim horum similium generum, quod non arte ac moderatione tractetur.—*Cicero, de Orat.*, III. 57.

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understood by the savage of the wilderness as by the most accomplished courtier.

The latter, artificial language, is peculiar to man, and notwithstanding the force of the learned arguments advanced in the debates between the ancient Stoic and Platonic philosophers—

"Utrum nomina rerum sint natura an impositione"—

"Whether words be assigned by some inherent principle of our nature or determined by mutual agreement,"—it is now generally received that as a system it is purely conventional. It springs from a particular compact by which it is resolved that a certain symbol shall be recognised as the representative of an idea.

Now, it is clear that the natural language is confined to the passions or sufferings in the abstract; it admits of but a limited vocabulary; it cannot enter into nor express the multifarious refinements of ideas which the gradually progressive advancement of mankind from a state of nature to a high state of civilisation has called into being. It must, therefore, hold a rank inferior to that which is the offspring of the human mind, advanced by the most assiduous cultivation.

But these arts may, without injustice, be classified as adopting these different modes of addressing the intellectual faculties through the external senses.

Architecture, an original science though it be, and without a prototype in nature, raises in us ideas of magnitude, grandeur, solidity, durability, proportion, lightness, convenience, or the reverse.

Sculpture, an imitative art, which owes its chief excellence to veracity, and in which one solid substance is made to represent another, in consequence of the nature of the materials in use and the severity and simplicity of its style, is restricted as to subjects within a limited range, which it may not transgress without not only violating its own prescribed rules, but displeasing or shocking the beholder. In its enchanting works, it is true, we are presented with the most perfect models of the human frame in the most

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striking positions, representing with the strictest fidelity its beauties and proportions. As the eye cannot at once embrace all the parts of a statue, it presents many points of view from which it may be inspected to advantage, and from each it offers to the beholder the subject as having assumed, as it were, a different form; while in a painting comprising many figures they necessarily bear a determined relation one to the other, and as the rays of light cast on them are assembled with reference to a certain position, from which they are supposed to emanate, it seldom happens that a picture can be viewed with equal satisfaction from more than one point.

Moreover, the projecting members of a picture (an effect produced by the illusion of shadowy relief) appear much flattened when contrasted with the solid body of a statue placed by its side. Notwithstanding these favourable circumstances, however, sculpture cannot with safety venture on a representation of the mixed passions, and having but one style, though it be the noblest and most dignified, it bears so close an affinity to painting that it may almost be said to be the same art employed on different materials.

As an art painting is more captivating to the general class of beholders, it is not so disdainful in its selection of subjects, and as their beauties are heightened by colour, perspective, and other resources denied to sculpture, the effects produced are more varied. However, if we explore the full range of its discursive operations, we shall find it deficient in many important particulars.

It may fascinate the eye and rivet the mind; the image which it offers in the most engaging dress may produce a vivid and a lasting charm; but curiosity receives at the first glance all the satisfaction painting can bestow. It lacks the persuasive power of eloquence which falls from the tongue, enforced by appropriate action. It is not capable of being enriched to the same extent as language is, by apostrophe, metaphor, simile, and the figurative application of attribute; and as it addresses the reasoning powers through the remote channel of allegory, which employs

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fictitious things and personages to shadow forth the truth, it fails to produce such conviction as is within the scope of argument. A difficulty, therefore, presents itself when we endeavour to conceive how Parrhasius succeeded in depicting the Demon Atheniensium exhibiting at once so many conflicting passions.

Volebat namque varium, iracundum, injustum, inconstantem: eundem exorabilem, clementem, misericordem, excelsum, gloriosum, humilem, ferocem fugacemque, et omnia pariter ostendere.—*Pliny*, Book 35, chap. 36.

It is equally difficult to comprehend the composition of the celebrated picture of Calumny by Apelles.* Ptolemy is represented seated on his throne, with ass's ears, listening to the charge brought by Antiphilus that Apelles was concerned in the conspiracy of Theodotus, the Egyptian governor of Cœle-Syria. Suspicion and Ignorance are at his sides—Calumny drags in a youth by the hair. She is preceded by Envy, followed by Deceit and Artifice, Repentance and Truth being in the background. To decipher this complicated piece requires a thorough understanding of iconology.

In sculpture as well as in painting there is the like vagueness and uncertainty in assigning to allegorical personifications attributes by which they can be constantly recognised by all. Thus, when Canova proposed his group of figures for the tomb of Titian, A.D. 1792, they were accepted as representing the actions and passions designated by him. However, the subscriptions to defray the cost of execution proving insufficient, the work was not carried out, and the sculptor, unwilling to lose altogether the fruit of his labour, by a few dexterous alterations converted the design so as to accommodate it to the purpose of a monument of Christina, Consort of Duke Albert, of Saxe Teschen—to be seen now in the church of the Augustines at Vienna. The original colossal dimensions were reduced. By removing her veil, and the addition of an urn, Painting was transformed into Virtue; Sculpture and Architecture became Innocence and Piety; Charity followed, leading an old man and carrying an orphan. The mourning lion, emblematical of the Venetian State, became the guardian of

* Lucian.

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the mausoleum, he himself being under the care of a keeper representing Grief. Two Genii, intended originally to support a medallion of Titian, were transformed into the genius Felicity and an Angel holding a branch of palm. The metamorphosis became thus complete.

But Poetry, prodigal of all the embellishments enumerated above, possesses the rare faculty of unfolding the most delicate and obscure emotions, of evolving from its hidden recess the germ of thought; by progressive steps expanding it into matured and lofty sublimity, and elevating the mind with the subject into the realms of fancy—while this effect is accelerated, refined, and heightened by the aid of music.

To illustrate this in each instance by example:—What statue, however exquisite, or painting, however excellent, can convey such a multitude of ideas as crowd upon the mind on reading this passage?—

> "Woe to the hand that shed this costly blood!
> Over thy wounds now do I prophesy
> (Which, like dumb mouths, do ope their ruby lips
> To beg the voice and utterance of my tongue).
> A curse shall light upon the limbs of men;
> Domestic fury and fierce civil strife
> Shall cumber all the parts of Italy.
> Blood and destruction shall be so in use,
> And dreadful objects so familiar,
> That mothers shall but smile when they behold
> Their infants quarter'd with the hands of war,
> All pity chok'd with custom of fell deeds;
> And Cæsar's spirit, ranging for revenge,
> With Até by his side, come hot from hell,
> Shall in these confines, with a monarch's voice,
> Cry Havoc! and let slip the dogs of war,
> That this foul deed shall smell above the earth,
> With carrion men groaning for burial."
>
> —*Julius Cæsar*, Act III., Sc. I.

Or this description of the fall of Satan and his angels:—

> "Hell heard the unsufferable noise. Hell saw
> Heav'n ruining from Heav'n, and would have fled
> Affrighted; but strict fate had cast too deep
> Her dark foundations, and too fast had bound.
> Nine days they fell. Confounded Chaos roar'd
> And felt tenfold confusion in their fall,
> Through his wild anarchy: so huge a rout
> Encumbered him with ruin." —*Paradise Lost*, Book 6, 867.

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Or how can the eminently picturesque description in Ossian, of the young Fillan, the son of Fingal, be pourtrayed?—

"On his spear leans Fillan of Selma, the son of Clatho, in the wandering of his locks. Thrice he raises his eyes to Fingal, his voice thrice fails him as he speaks. My brother could not boast of battles; at once he strides away. Bent over a distant stream he stands—the tear hangs in his eye. He strikes at times the thistle's head with his inverted spear."—*Temora*, Book III.

It is only necessary to repeat the passionate exclamation of Juliet, to show that, though highly figurative, it is not capable of representation by either of those arts:—

"Bondage is hoarse, and may not speak aloud—
Else would I tear the cave where echo lies,
And make her airy tongue more hoarse than mine,
With repetition of my Romeo's name."

—*Romeo and Juliet*, Act II., Sc. 2.

Add the description of the death of Troilus:—

"Parte alia fugiens amissis Troilus armis.
Infelix puer, atque impar congressus Achilli,
Fertur equis, curruque hæret resupinus inani,
Lora tenens tamen: huic cervixque comæque trahuntur
Per terram, et versa pulvis inscribitur hasta."

—*Æn.* i., 478.

Again, a picture which represents the Creation fills us with surprise and delight; we behold virgin nature investing herself with her bridal robes—beneath the artist's pencil the plains expand, the trees put forth their leaves, the mountains rear their beetling fronts—

"The grey-eyed morn smiles on the frowning night."

But can this, however grand the design or bold and masterly the execution, excite us in the same degree as the few and simple words—"Let there be light, and there was light;" a sentence which drew from the renowned critic Longinus the remark that—"The Hebrew legislator, no ordinary man, having conceived a just idea of the power of the Deity, has majestically illustrated it in the beginning of his law, furnishing an example of the true sublime."—*Essay on the Sublime.*

And yet to what a super-eminent degree of exaltation are not our senses carried away when these words burst on our

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astonished ears in the chorus of Haydn; when we may imagine we hear the Almighty fiat echoed by the angelic choir, and that we behold the orb of day piercing through and rending asunder the mantle of chaotic darkness, irradiating space and filling the heavens with the effulgence of his beams.

There is also a peculiar distinction between the modes of production of the works of these respective branches of the Fine Arts.

The practice of Architecture is directed by general and even mechanical rules; these are also subservient in a degree to the Painter and the Sculptor; but as the professors of these latter arts undertake the representation not only of the forms of animate and inanimate nature, but also of the emotions and passions of the human soul, manual dexterity avails but little indeed, unless it be quickened by fancy and guided by a tutored observation and a chastened taste.

However, when the ideal model of perfection of the object to be represented is bodied forth, the work of the operator is concluded; the spectator has but to turn his eye upon the frowning tower, the airy spire, the glowing canvas, or the swelling marble, and until Time has laid his destructive hand on the materials, and crumbled the mass or effaced the outlines, these objects remain to give rise to the same idea in the minds of those who behold them.

Still, they are mute, they are unvarying; their situation is fixed; they must be visited by their admirers: the organ through which they wake up the elements of intellectual enjoyment is dependent on the aid of light; without it the most laboured performances of the most highly-favoured artists are to the most keen-sighted "without form and void:" and even when beheld under the most felicitous combinations of light and shade, there is an absence of mutuality of gratification on the part of the spectators; each views independently either the comprehensive whole, or dwells on some subordinate and particular beauty, and from the contemplation derives his individual satisfaction; all are not at once impressed with the same idea.

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The impression they produce is, it is true, the deepest which can be produced instantaneously; a remarkable circumstance, as it requires no effort, but appears to be of spontaneous growth: nevertheless, although Horace goes so far as to affirm "that those matters which are admitted by the ear affect the mind less forcibly than those submitted to the faithful eyes,"

> "Segnius irritant animos demissa per aurem,
> Quam quæ sunt oculis subjecta fidelibus."
>
> *Ars Poet.*, 180.

A doctrine indeed put into the mouth of Candaules by Herodotus, Clio. VIII., advanced by Polybius on the authority of Heraclitus, and established in a remarkable manner by the orator Hyperides,* as also rendered with the greatest felicity by Shakspeare, although, perhaps, unconscious of the existence of the original—

> "Action is eloquence, and the eyes of the ignorant
> More learned than their ears."
>
> *Coriolanus*, Act III., Sc. 2.

These arts are apparently defective in this particular, that the history of the subjects they deal with is necessarily confined to a single instant of time, and is incapable of carrying on a succession of incidents; while it is rare to find that any sympathetic passion can be raised to its summit without, if not a succession, at least a reiteration of impressions.

With the works of the musician and poet it is otherwise, and the result produced by them is also characteristically different; they have to embody that which is purely intellectual; the notes which the musician modulates into a delightful symphony or a resounding chorus, unlike marble, canvas, and colours, the tangible materials of the former artists, lie dormant until summoned by the master-spirit

* Hyperides, son of Glaucippus, was an Athenian orator, and a rival of Demosthenes, put to death by Antipater, B.C. 322. He once defended the celebrated Phryne, accused of impiety, and when he perceived that his eloquence was ineffectual, he removed the veil from the face of his client, upon which the judges, influenced more it is supposed by her exquisite loveliness than by his oratory, and more to be commended for their gallantry than integrity, acquitted her.—*Athenæus, Deip.*, lib. xiii.

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from their slumber in the body of the violin or the tubes of the organ; and until it is his high privilege to

> "Wake into voice each silent string,
> And sweep the sounding lyre."
>
> *Pope, Ode to St. Cecilia's Day.*

Their existence, after the labours of composition are ended, depends in many instances also on the agency of others, and that existence is brief and transitory; the sound which announces their birth is the knell of their death; the words adopted as the symbols for conveying the ideas of the poet fade away into ether at the moment the tongue gives them utterance.

Yet, evanescent and transient as are these sounds, the materials of the musician and poet are indestructible. Those melodies, of the most ancient of recorded musicians, which have been preserved, are to our ears as fresh and new as they were to those of the persons who heard them at the first hour they were sung. We can now, after the lapse of ages, dwell with a holy rapture on the divine hymns of the minstrel monarch, and the sublime productions of other inspired writers. The lofty compositions of the earliest of known heathen poets still call forth the applause of the present time, and will command the approbation of ages yet to come. And they have not only survived most of the laboured productions and stupendous works of coeval periods in the other branches of art, but they flourish with a robust and perennial vigour, and suffer no impairing debility from the accumulation of centuries.

These performances also possess this immeasurable superiority, they are reproductive to an indefinite extent, and their reproduction is not mere imitation or multiplication of which the others are capable, but is invested with all the charms of originality, and at each fresh representation, when addressed to an audience, differing from the former in genius, mood, or disposition, or to the individual influenced by altered circumstances, feelings, or temperament of mind or body, they can excite new passions, or strike with some latent beauty unappreciated before.

They can, moreover, at the most remote and distant parts

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of the globe, at the same instant, please both the isolated recluse and congregated hundreds; may melt the human heart to pity, or fire the soul with heroic aspirations. And they affect the individual and the assembled auditory alike, though not perhaps in the same degree, for the visible communion of numbers imparts sympathetically an inconceivable intensity to those feelings aroused less actively in the solitary individual.

They do not content themselves with arresting thought and fixing the mind upon one or on several co-existent ideas, but they lead on the hearers by a pleasing train of tasteful imagery or harmonious modulation, kindling affections in the inmost depths of the soul, until, entranced by the rapid succession of varying emotions, all are together hurried on to the same climax of delight and wonder.

The origin of Music, as well as that of Poetry, must necessarily be enveloped in the mists of obscurity, and inquiries based on scanty facts, fallible hypotheses, and illusory probabilities, are more entertaining to the antiquarian than instructive to the reader. The simplicity of manners in infant communities, and the ignorance of primitive people in the arts of polished life, together with the admixture of truth and fiction in their traditions, cause the narration of events to be transmitted with so much uncertainty that the path of the investigator is impeded by difficulties almost insurmountable. Still we are not justified in confining our researches on the subject to the history of any one kindred or people, for *Music*, viewed as a science which gives vitality to those harmonical constituents which exist in an undefined and incorporeal state in nature; and *Poetry*, considered as the art of creating from intellectual materials, by an effort of the imagination, that which is beautiful, pathetic, sublime or terrible, imposing or repulsive; of adorning that creation with all that is most captivating and alluring; of recalling images from the past, awakening them from the sleep of death*—nay, of evoking

* This is done by the use of the figure called Prosopopœia:—"The voice of thy brother's blood crieth unto me from the ground" (Gen. iv. 10). "When

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them from realms beyond the tomb, and the finite limits of this worldly sphere; of impersonating abstract idealities, endowing with life and speech things inanimate and speechless, surprising the mind, charming the senses, or agitating the passions; these, I say, Music and Poetry have, by the benignity of Providence, been extended even to those races which we are accustomed to call barbarous and savage.

The Greeks, who reverenced Music much more highly than the Romans did, honoured it as the foundation of all the sciences.*

Their poetry, to which rhyme or the consonance of vocal sounds was unknown, and which was usually accompanied by Music, depended for its melody essentially on rhythm, or the relative duration of time employed in pronouncing the syllables in a verse. They consequently devoted themselves with great attention to the regulation of the laws of melody, many of their philosophers being of opinion that all the dispositions of physical existence bore a certain determined relation to a particular system of concords. They attributed the instruction of their ancestors in the art of Music to direct divine benevolence, and adored Apollo, Minerva, Mercury, the Muses, and other deities, as presiding over it, governing and inspiring its professors. The tales of the nymph Syrinx, transformed into a reed to escape from the importunate pursuit of Pan, from the tubes of which plant the

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the ear heard me, then it blessed me; and when the eye saw me, it gave witness to me" (Job xxix. 11). Again,

> "We ransack tombs for pastime; from the dust
> Call up the sleeping hero; bid him tread
> The scene for our amusement."
>
> *Young's Night Thoughts*, ix.

> "I ask the earth have not the mountains felt?
> I ask yon heaven, the all-beholding sun,
> Has it not seen The Sea in storm or calm,
> Heaven's ever-changing shadow spread below?
> Have its deaf waves not heard my agony?"
>
> *Shelley's Prometheus Unbound.*

* Scimus enim musicen nostris moribus abesse a principis persona: saltare vero etiam in vitiis poni; quæ omnia apud Græcos et gratia et laude digna ducuntur (Cor. Nep. in Epam. i.).

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disappointed god formed a pipe, designated by his name; of Marsyas, flayed alive by Apollo, victorious over him in a musical contest; and of Midas, whose ears were converted into those of an ass, as a punishment for the pravity of his judgment in maintaining that the performance of Pan,* in singing and playing, was superior to that of Apollo, (though of Grecian invention,) have formed the subjects of some of the most agreeable poetry of Ovid in his *Metamorphoses.*

Moore, in the "Fudge Family in Paris," gives a modern political version of this myth:—

"Great King Midas,
Who, though in fable typified as
A royal ass by grace divine,
And right of ears most asinine,
Was yet no more in fact historical,
Than an exceeding well-bred tyrant,
And these, his ears, but allegorical,
Meaning informers kept at high rent."

The speculative Lucretius denies to music this graceful genealogy, and deduces from a less poetical source the combination by mankind of harmonious sounds. Assuming that the music of nature first enthralled the ear, he suggests that imitation was the first active principle which impelled man to attempt the art. He says—

"At liquidas avium voces imitarier ore
Ante fuit multo, quam lævia carmina cantu
Concelebrare homines possent, aureisque juvare.
Et zephyri cava per calamorum, sibila primum
Agresteis docuere cavas inflare cicutas.
Inde minutatim dulceis didicere querelas
Tibia quas fundit digitis pulsata canentum
Avia per nemora ac sylvas saltusque reperta
Per loca pastorum deserta atque otia dia."—Lib. V. 1378.

* Ausus Apollineos præ se contemnere cantus
Judice sub Tmolo certamen venit ad impar.
Monte suo senior judex consedit; et aures
Liberat arboribus. Quercu coma cærula tantum
Cingitur; et pendent circum cava tempora glandes.
Isque Deum pecoris spectans in judice dixit
Nulla mora est. Calamis agrestibus insonat ille
Barbaricoque Midan (aderat nam forte canenti)
Carmina dilinit * * partem damnatur in unam
Induiturque aures lente gradientis aselli.—*Ovid, Met.* xi., 155.

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Thus rendered by Mr. Good:—

> "And from the liquid warblings of the birds
> Learn'd they their first rude notes, ere music yet
> To the rapt ear had tun'd the measur'd verse,
> And zephyr whispering through the hollow reeds
> Taught the first swains the hollow reeds to sound.
> Whence woke they soon those tender trembling tones,
> Which the sweet pipe, when by the fingers prest,
> Pours o'er the hills, the vales, and woodlands wild."

Capella, of Madaura, in Africa, who lived in Rome, under Leo the Thracian, about A.D. 457, and wrote a curious work on music, adopts the same source of derivation.

But I am by no means willing to receive so servile a paternity for such a liberal science, and it is but a shadowy style of argument which attempts to rob "MAN," the only reasoning animal in creation, of originality in the discovery of what is eminently inventive. It is usual to say that birds sing, nevertheless an imitation of their notes is accomplished by whistling, piping, hooting, screaming, crowing, rather than by the vocal effort which we call singing.* The first musical efforts were doubtless unskilful and monotonous, but it does not necessarily follow that man was a slavish copyist; and it is conceding as much as need be granted if we admit, that during the gradual development of the art the murmuring of the waterfall, the sighing of the wind through trees, or its Æolian vibration through rocks, or the melody of the feathered choristers, suggested ideas which enriched the primitive melodies. And it is highly probable that its basis must have been sufficiently established before recourse was had to the adoption of extrinsic agency for inspiration.

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* Kircher has investigated this question, and given expression in musical notes to the songs of several birds, amongst others of the nightingale, parrot, and quail. Sir John Hawkins pursues the inquiry further, and renders in notes part of the song of the blackbird, and the noise of the cuckoo, the "voice"† of the domestic cock, and the cackling of the hen after she has laid her egg. He sharply corrects the error of Kircher with respect to the intonation of chanticleer, and assures us with becoming gravity that the song of the blackbird consists of a true diatonic interval, while the exulting Dame Partlet indulges in a major sixth.

† "He shall rise up at the *voice* of the bird" (Eccles. xii. 4).

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The charge of imitation may, with more apparent truth, be brought against the fabricators of artificial language, who, in selecting such words as buzz, whisper, rattle, crash (and similar words are to be found in all languages), have, by a figure termed onomatopœia, adapted the natural sound of the act, the idea of which they wish to convey, to the word, the medium of communicating that idea.

The most intimate association appears to have subsisted since the earliest times between the arts of music and poetry, and we may well suppose that as soon as the flexibility of the human voice, and its aptitude to the inflection of different tones, were ascertained, its cultivation for solitary or domestic recreation became a study.

The gift of speech, that invaluable blessing which of itself distinguished the "articulate speaking man" from the brute creation, became accordingly more enlivened and animated.

When the imagination glowed with the force of some sentiment which strongly possessed it, and the ordinary language was found inadequate to give utterance to the new and elevated idea, the forms of speech were invested with a more particular grace and beauty, and men's thoughts were clothed in phrases more vigorous and ardent. It was then discovered that the usual tone of voice but languidly expressed the emotions which agitated the breast.

A warm and affecting, or a loud and piercing tone, was consequently assumed, and the voice partook of modulations unattempted before. By augmenting or diminishing its volume, by sudden pauses, irregular bursts, rapid alterations, or studied repetitions, the effect of different passages was enforced, modified, heightened, or embellished. At last, not contented with even this improvement, the aid of mechanical ingenuity was invoked, and musical instruments were fabricated, which assisted the vocal powers by contributing a variety and extent of sounds of which the human voice was incapable.

We can judge of the great antiquity of instrumental music by calling to mind that it is recorded in the most ancient of writings extant among us, that Jubal, the eighth

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in order of descent from Adam, was the father of all such as handle the harp and organ (Gen. iv. 21).

Peter de Riga, who wrote his *Aurora* at the beginning of the thirteenth century, adopted the idea that the attention of Jubal was first attracted to musical notes on observing the different sounds produced by the strokes of his hammer on an anvil; he says—

"Aure Jubal varios ferramenti notat ictus.
Pondera librat in his. Consona quæque facit,
Hoc inventa modo prius est ars musica, quamvis
Pythagoram dicant hanc docuisse prius."

Chaucer alludes to this—

"Although I coude nat make so wele
Songis, ne knew the Arte so al,
As coude Lameke's sone Tubal,
That founde out first the arte of songe,
For as his brothir's hamirs ronge
Upon his anvelt vp and downe
Thereof he tooke the firste sowne.
But Greekes saine of Pythagoras
That he the first finder ywas
Of th' arte; Aurora telleth so."

Dreme, 2, 1160.

Walter Mapes also gives credit to Pythagoras. He says:

"Frequens Pythagoras circa fabrilia
Trahit a malleis vocum primordia."

Apoc: Goliæ Episcopi, 43.

According to the notions of the middle ages, Pythagoras first made known to the Greeks the Seven Arts of the Schools. They were ranged under two divisions:—Trivium—Logic, Grammar, Rhetoric; Quadrivium—Arithmetic, Geometry, Astronomy, Music.

The legend ran that Tubal Cain was the inventor of these arts, and apprehensive that they might be lost, he engraved the principles of them on two pillars of stone. One of these pillars was subsequently found by Mercury, the other by Pythagoras.

Butler ridicules this derivation. When enumerating the subjects which his hero could prove, he says:—

"Who first made music malleable."

Hudibras, 1, 182.

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This would at first tend to the supposition that even in those early times, before the deluge, stringed and wind instruments were in use; and the chief difficulty in deciding the question arises, as it appears to me, from the inappropriate adoption of the word "organ" in the English version.

In the Hebrew the word is "huggab," and deriving it from the verb "haggab," which signifies primarily "to blow," it may be translated a pipe, or as it is otherwise rendered in Greek, "to place upon or adapt," may perhaps imply an instrument similar to the former mentioned in the text.

In the Greek Septuagint, the instruments are called psaltery and harp, a translation adopted by Whiston in his edition of the *Antiquities of the Jews* by Josephus, who records the same circumstance.

In the one hundred and fiftieth psalm the same word occurs, where it is rendered in the Septuagint organon, in the English "organ;" but this I can hardly conceive to be conclusive of the fact of the instrument being a wind instrument; for Lucian uses the same word, literally translated organ, when he describes Apollo as relating to Vulcan how Mercury converted the shell of a tortoise into a musical instrument. From the account, it must have resembled a lyre, and indeed in the Greek language the other name for it was chelone, derived from chelus, a tortoise, as in Latin it was called testudo. The god produced tones from it which excited the envy of the narrator.

Dryden makes no allusion to a wind instrument when he celebrates the invention of Jubal. He may have had the above-quoted passage of Lucian in his mind when he says—

"What passion cannot music raise and quell?
When Jubal struck the CHORDED SHELL*
His list'ning brethren stood around,
And wond'ring on their faces fell,
To worship that celestial sound."

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* The shell is by the figure called Metonymy made a classical generic type for music.

"'Twas Milton struck the deep-toned shell,
And as the choral warblings round him swell,
Meek Newton's self bends from his state sublime,
And nods his hoary head and listens to the rhyme."—*Gray.*

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Whichever interpretation we accept, it is by no means probable that such an artificial complication as that of an organ would precede the construction of more simple wind instruments. Moreover the names given in the Latin tongue to several would justify the conclusion that, as different substances were resorted to, their structure became progressively more elaborate, and thus we are furnished by the nomenclature with a key to the history of mechanical improvement.

Thus Calamus and Arundo, which signify a reed, and Avena and Stipula, a corn stalk or stubble, were names given to the pipe formed, in its rudest state, of such materials; Concha, a shell, is mentioned by Virgil as a martial instrument; Cornu, which means a horn, was the name still retained after it had been discovered that sounds could be produced by blowing through it, and Æs, the name for brass, was applied after that metal was substituted for the animal substance. Buxus, a box tree, was given as the name of the instrument, when the wood of that tree was employed as suitable for its formation, as the name of Loton was given to another made from the wood of the lotus tree. Tibia, translated the bone of the leg, also means a flute, which would induce the apprehension that the discoverer had been sacrilegiously whistling through the shin-bone of an ancestor.

The organ, *the* instrument, so-called by pre-eminence, being the most powerful and harmonious of all instruments, is said to have been invented by Ctesibius, an ingenious mathematician of Alexandria, who flourished about B.C. 250.* He applied his mechanical knowledge to furnish an artificial supply of air for the pipes, and accomplished his purpose by means of hydraulic apparatus.

Some historians contend that the organ was not uncommon at Rome in the time of Nero, and even assert that the tyrant himself performed on the instrument. It is recorded of him that on one occasion, when intelligence arrived of disasters in Gaul, he, without consulting the

* Vitruvius IX. ix.

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senate or the people, summoned some of the leading men to his house, and after a hurried consultation amused himself by taking them to see some musical instruments played by water, and explaining the principles of the contrivance.*

It does not appear to have been called into general use until the eighth century, at which period (if we may give credit to the statement of contemporary writers) the Emperor Constantine Copronymus presented one, together with various other musical instruments, to King Pepin of France, son of Charles Martel.

Mention is made of the organ by Claudian the poet, also a native of Alexandria, who flourished at the time of the Emperors Arcadius and Honorius, A.D. 400.

> "Et qui magna levi detrudens murmura tactu
> Innumeras voces, segetis moderatur ahenæ
> Intonet erranti digito—penitusque trabali
> Vecte laborantes in carmina concitet undas."

Probably the first used in England, was presented by the celebrated St. Dunstan to the Abbey of Glastonbury, in the reign of King Edgar, about A.D. 960. It was fabricated by the hands of the saint, the pipes were of brass, and on it were inscribed two lines—

> "Organo de sancto præsul Dunstanus Aldhelmo
> Perdat hic æternum qui vult hinc tollere regnum."

Thus rendered in doggrel metre:—

> "To Glastonbury's sacred shrine I, Dunstan, here have given
> This organ: may who takes it hence ne'er reach the realms of Heaven."

William of Malmsbury relates that Gerbert, the Monk, better known as Pope Sylvester II., presented to the Cathedral of Rheims, when he was Archbishop of that See, in A.D. 1002 (as proof of his mechanical skill), a clock and hydraulic organ, the latter of which was constructed with a surprising

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* Ac ne tunc quidem aut senatu aut populo coram appellato quosdam e primoribus viris domum evocavit; transactaque raptim consultatione reliquam diei partem per *organa hydraulica* novi et ignoti generis circumduxit, ostendens que singula de ratione ac difficultate cujusque disserens, &c., &c.—*Suetonius, Nero*, 41; *Athenæus, Deip.* iv. 75; *Anthol. Græc.* iii. 13.

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ingenuity, and the air was made to escape in a wonderful manner by the force of heated water, which filled the cavity of the instrument, causing the brazen pipes to emit modulated sounds through the multifarious apertures.

The sacred writings abound with allusions to music, and afford numerous instances of recourse being had to it on various occasions.

Thus when Jacob had departed clandestinely from the house of his father-in-law, he was reproachfully asked by Laban, who pursued and overtook him—"Wherefore didst thou flee away secretly, and steal away from me, and didst not tell me, that I might have sent thee away with mirth and with songs, with tabret and with harp" (Gen. xxxi. 27).

After the successful passage of the Red Sea, Moses, in the fervour of his enthusiastic rejoicing, broke forth with the children of Israel into a sublime hymn, and Miriam the prophetess, the sister of Aaron, took a timbrel in her hand, and all the women went out after her with timbrels and with dances (Exod. xv. 20), and in responsive chorus gave utterance to triumphant and pious feeling.

The daughter of Jephtha, in an unpropitious hour, welcomed her father "with timbrels and with dances" (Judges xi. 34); and in like manner "the women came out of all the cities of Israel, singing and dancing, to meet King Saul, with tabrets, with joy, and with instruments of music" (1 Sam. xviii. 6). In Judith's song of Praise, her exordium is "Begin unto my God with timbrels, sing unto my Lord with cymbals" (Judith xvi. 2).

But it was not solely on occasions of rejoicing that recourse was had to MUSIC; before the invention of letters mankind possessed no means of transmitting to their descendants permanent records of the precepts of religion, their devotional exercises, the normal rules of civil government, or the remarkable actions of their renowned sages and heroes.

The preservation of these depended upon tradition, and they were entrusted to the fleeting memory; it became necessary, therefore, to labour to produce on the mind a

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vivid impression of the principles to be inculcated, or of the deeds to be celebrated; and to cause the impression thus produced to be retained with fidelity and tenacity.

The rude effusions which the enthusiasm of superstition, fancy, or passion suggested to untutored men, required condensation; and as this became a subject of increased solicitude, it gave rise to a studied brevity and conciseness, an epigrammatical antithesis and rhythmical cadence, an unusual collocation of words, and the employment of daring metaphor, in which we may trace the first outlines of Poetry.

It is in this sense that Poetry has been said to be the "Elder brother of Prose:" not indeed that at any time the ordinary discourse of mankind was conducted in verse, but that the portion of their communication, which was worthy of being remembered by a future age, was embalmed for preservation in poetic numbers. Even after the invention (or perhaps the introduction into Greece) of the art of writing, priests, statesmen, historians, and philosophers, continued to deliver their instructions and sentiments in Poetry. For it was not until the time of Pherecydes, a philosopher of Syros, who flourished about B.C. 570, and who was the disciple of Pittacus, and tutor of Pythagoras (the philosophical tenets of the latter of whom were preserved in the celebrated "Golden Verses," though these are attributed by some to Lysis, the master of Epaminondas), that philosophical doctrines *in prose* were usually committed to writing; nor until the age preceding that of Herodotus, who came into notice about B.C. 445, that history was known in any other form than that of poetic legends similar to our "Border Tales." Nor did the Romans, as it is asserted, adopt that essential style of writing until the age of Appius Claudius, surnamed Cæcus, or the blind, who lived about B.C. 280.

In order, therefore, to attract attention to the subject on which the ancient bard exerted his talents, and to cause the fruit of his labour to obtain an extensive circulation amongst his cotemporaries, he was forced to render the melody of his numbers so agreeable to the ear, the bold figures and

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highly-wrought descriptions so pleasing to the imagination, the pathetic alternations of joy, grief, love, anger, pity, and terror, so affecting to the heart, and the exalted tone of dignified expostulation so convincing to the understanding, that one of the chief amusements of garrulous old age would be to repeat, and one of the highest enjoyments of ingenuous youth to listen to his verses, and treasure them in the store-house of the memory.

The sacred volume informs us, moreover, that music was appealed to by those prophetically inspired, either to inflame the ardour of their religious zeal, or to enable them to enunciate with more effect their heaven-sent messages.

Saul is told by Samuel, "It shall come to pass when thou art come thither to the city, that thou shalt meet a company of prophets coming down from the high place, with a psaltery and a tabret, and a pipe and a harp before them, and they shall prophesy" (1st Samuel x. 5).

And when the armies of Israel, Judah, and Edom went up against Moab, and were on the point of perishing in the wilderness for want of water, and King Jehoram made an appeal to the Prophet Elisha to declare the will of the Most High, he commanded that a minstrel should be brought to him—"And it came to pass, when the minstrel played, that the hand of the Lord came upon him" (2nd Kings iii. 15).

Another remarkable and affecting instance of the power of Music is afforded in the history of Saul, related with a simplicity and dignity peculiar to that work, that "When the evil spirit from God was upon Saul, that David took an harp, and played with his hand: so Saul was refreshed, and was well, and the evil spirit departed from him" (1st Samuel xvi. 23).

Homer, in the *Iliad*, supplies us with a somewhat similar incident; he mentions that Achilles, when he withdrew himself from the princes assembled before Troy, relieved the monotony of his seclusion and that of his friend Patroclus with music, and when Phœnix, Ajax, and Ulysses were sent as delegates to him and arrived at his tent,

> "Amused at ease the God-like man they found,
> Pleased with the solemn harp's harmonious sound

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(The well-wrought harp from conquered Thebae came,
Of polished silver was its costly frame).
With this he soothes his angry soul, and sings
Th' immortal deeds of heroes and of kings;
Patroclus only of the royal train,
Plac'd in his tent attends the lofty strain;
Full opposite he sat and listen'd long,
In silence waiting till he ceas'd the song."

Iliad ix., v. 246.

A similar example is afforded in modern history A.D. 1736, in the ascendancy achieved by the Italian singer Farinelli, over the morose and melancholy Philip V. of Spain. By his remarkable power of fascination he awakened a novel sensibility in the gloomy and phlegmatic soul of the king. Every night for ten years he sang to him the same four airs, and the influence of this singer's art was employed by the ministers to arouse the king to the discharge of his ordinary duties. In justice to the singer it should be observed that his power was never employed for an unworthy purpose.

If we undertake a literal and prosaic interpretation of the history of the heroic age of Greece, we shall find a profound and instructive moral concealed amidst the confusion of fable; and the harmless deception is calculated to elevate rather than degrade these arts, inasmuch as they were invariably instrumental in civilising a barbarous people.

The names of Amphion, Linus, Chiron, Orpheus, Thamyris, or Tiresias are usually associated in our minds with vague ideas of erratic extravagance or enthusiastic rhapsody, rendering the actual existence of such persons a matter of uncertainty; but taking that for which there must be some foundation for granted, it is easy to conceive that their attainments were so superior to those of the people around them, that an ignorant and credulous race would not fail to attribute to them superhuman abilities and præternatural powers.

Exalted by an intellectual supremacy, they well knew that the temperate language of cool reasoning was ill adapted to a fierce and impatient audience, whose occupation of war was relieved either by a torpid state of inaction, by the ferocious sports which reflected its image, or by the hazardous

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amusement of the chase; accordingly the methods they proposed for introducing their ameliorating innovations were detailed with an eloquence at once impassioned and persuasive, to which being superadded the novel excitement of Music and versification, the passions of their hearers were swayed in the direction to which it was desired that they should be inclined, and were finally so calmed and soothed that the delighted rustics surrendered themselves, and were led unreluctant captives beneath the yoke of civilisation.

To these great masters* then is due much higher commendation than that unmeaningly lavished on those composers, whose selfish proficiency has been exercised for objects far beneath this philanthropic utility; for *they* struck the chord which vibrates in the human heart, *they* weaned the children of the desert from their wild life of vagrant liberty, induced them to blend together in friendly communities, and by a successful improvement of their rational faculties insensibly led them to interchange the amenities of social and domestic intercourse, to submit themselves to the government of laws, to build cities, and exercise the useful arts, to prize and cherish the inestimable advantages of a regular and well-ordered communion.

The progress of Poetry, nurtured in those sacred places which piety dedicated to the praises of the gods, may be traced from the first outbursts of the vehemence of expression moulded by degrees into irregular numbers. The ancient bard, accustomed to the most unrestrained converse with the works of nature and untrammelled by the technical restrictions of artificial rules, dealt rather with ideas and images than with the refinements of diction.

The deities in their acknowledged omnipotence, nature in its vastness and grandeur, and the human passions worked to the summit of intensity, supplied him with themes infinite and sublime. His mind, being inflamed by abstracted speculation, a copiousness of expression to clothe his ideas in

* Ecclesiasticus, chap. 44:—"Let us now praise famous men, and our fathers that begat us. * * * Such as found out musical tunes and recited verses in writing."—ver. 1 and 5.

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words suited to his wild and fanciful conceits was not denied him.

The irresistible fascination of this new power, operating on that disposition of the mind by which it suffers itself to be beguiled into a ready belief of what is wonderful, enabled him to exaggerate with impunity the stature of the heroes of a former era; the vigour of superstition shed a halo around their names, imagination magnified their acts into gigantic proportions, so that the poetry of the primitive ages (like the Cyclopean architecture) was massive, startling, and imposing, and inspired feelings of reverence, surprise, and awe.

The different occasions of religious or secular rejoicing stimulated the Bard to pour forth an irregular Hymn or Ode—sacred, panegyrical, or festive; the groves and lawns resounded to the Pastoral strain.* Love made poetry his servant and interpreter, and enlisted the auxiliary allurements of its seductive eloquence and melody. War raised his standard and called for the excitement of martial chaunts to arouse his followers, and the declamatory exultation of heroic songs to celebrate their victorious achievements. Death shook his fatal dart, and the bereavement of friends, linked in the bonds of tender affection, exacted lamentations reduced into verse, plaintive or Elegiac. The memorable undertakings in which their heroes shone forth with peculiar splendour, led on to the construction of a protracted narrative in the Epic style; until at last, by the introduction of real persons, representing the actions and uttering the sentiments of those heroes, the Dramatic Art was established.

Music, adapting itself to similar modifications, accompanied Poetry throughout, and even when Tragedy surmounted the obstacles which opposed the effective display of the operation of the passions, and reached the surprising degree of excellence which stamps the productions of the

* "Ainsi l'Astronomie est fille de l'oisiveté, La Géometrie est fille de l'interêt, et s'il etoit question de la Poësie nous trouverions apparemment qu'elle est fille de l'Amour."—*Fontenelle, Plur. des Mondes*, soir 1re.

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Grecian authors, the influence of Music was not disregarded. The voice of the Chorus was heard at appropriate intervals, commending virtue, denouncing vice, interceding with the gods to avert destruction from the innocent, and imploring them to hurl their avenging bolts upon the guilty. Music and Poetry may then be said to have appeared together on earth amongst the children of men, enlightening their ignorance, ruling and directing the first social efforts of the human family, restraining the turbulence of the passions, heralding the advent of the other sciences, primary and elementary ingredients in the establishment of the Civil polity.

The reverence for music entertained by the ancient Greeks (to which I have before alluded) may be judged of by an extract from the historian Polybius. Having recorded the burning of the city of Cynætha by the Ætolians, he descends from the gravity of historical narration to remark—"No people were esteemed so justly to have deserved the treatment to which they were exposed, and though the Arcadians as a nation are distinguished for their humane and hospitable disposition, the Cynæthans, though confessedly Arcadians, are notorious for their uncultivated manners, their wickedness, and cruelty. This marked distinction springs in my opinion from this cause, that they were the first and only people of Arcadia who flung from them that institution, established by their forefathers with the most consummate wisdom, and with a delicate regard for their natural genius and peculiar national disposition. The institution to which I allude is that for the teaching of 'Music,' of unadulterated and perfect Music, useful indeed in every state, but indispensable in Arcadia . . where the life of the inhabitants is one of toil, and the temperature of the climate severe.

"For we ought by no means to countenance the doctrine advanced by Ephorus in the preface to his history, unworthy of that writer as it is, that 'Music was invented to deceive mankind.' Nor can we suppose that the ancient Arcadians blindly, and without some object, interwove this art with the texture of their political constitution, obliging not only

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their children, but their young men, to practise music until they had reached thirty years of age. The laws require that every one should be instructed in the art . . and it seems evident to me that it was not introduced merely as a source of idle pleasure or luxurious enjoyment. . . . But the people of Cynætha, having disregarded music and the kindred sciences, were continually engaged in intestine quarrels, until they became the most fierce and savage of the Grecians, and were held in such universal detestation that when after the above-mentioned calamity had befallen them they sent an embassy to Lacedemon, their deputies were ordered by the public crier of each city through which they passed to depart forthwith. . . . This may suffice to remind them that the cultivation of music was established by their Legislature, not for the diversion of the slothful, but for such substantial reasons as ought to incline them to its study; and they may derive some advantage from this notice I take of the subject in my history, and should the gods bless them with improved sentiments, they may apply their minds to the acquisition of such arts as may refine their manners, and more particularly to 'Music,' by means whereof they can alone expect to divest themselves of that savage ferocity which has been for so long a time their characteristic" (Polybius, lib. iv., cap. 20).

It is a matter of extreme regret that more of the music to which such astonishing power is attributed has not been handed down to us, and I can well conceive the gratification which the sincere admirers of the art would experience in listening to the strain with which Demodocus charmed the spell-bound audience at the court of Alcinous; or to the liquid notes which accompanied the burning words of the Lesbian Sappho: to

> "Hear how Timotheus' varied lays surprise,
> And bid alternate passions fall and rise."

Or in unravelling the mysterious tradition by which the Christian St. Cecilia has been enthroned in the place of the heathen Pierides; to be enabled to mark the effect which the alterations in the structure of society, the fusion of

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races, the modification of philosophical systems, and the substitution of revealed religion for the pomp and sensuality of Paganism, had upon the genius of the science.

Interesting as are the subjects of the metrical elements of poetry, and of musical notation, I cannot at present pursue them farther than to remark that the ancient Greek scale—limited in its original simplicity to four tones (te, ta, the, tho)—was styled the Tetrachord of Mercury* (its supposed inventor), and though it subsequently became extremely complicated, it has been remarked that "rhythm and melody were the predominating principles of ancient as harmony is of modern music."†

However, a complete change took place about the 10th century, by the substitution of the system of Guido Aretino, which has received the name of "Solmisation." He was a Benedictine monk, highly gifted with musical taste and a nice perception of the congruity and dissimilarity of sounds. Having been forcibly struck by the remarkable iteration of the syllables with which the verses of the hymn to St. John commenced, he conceived the design of applying them to mark his new system of notation, by which he converted the ancient arrangement into a hexacord.

The hymn is as follows:—

"Ut queant laxis Fa muli tuorum
Re sonare fibris Sol ve polluti
Mi ra gestorum La bii reatum."
Sancte Joannes.

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* There were three kinds of Tetrachord introduced from Asia—the Dorian, Phrygian, and Lydian. Of the Octachord there were seven—the Dorian, Phrygian, Lydian, Hypodorian, Hypolydian, Hypophrygian, and Mixolydian. Aristoxenus enumerates thirteen; later writers, fifteen kinds. Of the musical sects there were the Agenorian, Eratoclian, Epigonian, and Damonian. The last was founded by Damon, the instructor of Pericles. —*Plato, Rep.* iii. 11.

† It is hardly necessary to observe that melody differs from harmony, as it consists in the agreeable succession and modulation of sounds by a *single voice* or instrument. Harmony consists in the accordance of different voices, or intervals of sound, or the union or consonance of chords. Poetry, therefore, can only reach melody; music, by the combination of co-existing sounds, is permitted to achieve harmony.

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The six notes, then, were—

Ut, Re, Mi, Fa, Sol, La.

Subsequently the first (being found too dull a sound) was altered by the Italians to *do*, and a seventh note, *si*, being added, either by De Nivers, Le Maire, Vander Putten, John de Muris, or Ericius Dupuis (for authors do not agree on that head), the gamut was enlarged to a heptachord, and now contains, as you are aware, seven notes—

Do, Re, Mi, Fa, Sol, La, Si.

A valued friend has translated the above-mentioned hymn for me, and adapting this circumstance he has, by the felicitous exercise of ingenuity, introduced into the last line, the G not represented in the original.

"A ll that is foul,
B aptist most pure,
C leanse our lips from;
D eeds thine to extol
E nable your
F ollowers—come
G ift us with power."

Shakspeare gives only five notes in the English gamut of Hortensio, while in the Italian he shows us a Hexachord. When paying his addresses to the fair Bianca in the guise of a music master, he says—

"Madam, before you touch the instrument
To learn the order of my fingering,
I must begin with rudiments of art;
To teach you *gamut* in a briefer sort,
More pleasant, pithy, and effectual,
Than hath been taught by any of my trade,
And there it is in writing fairly drawn.
Bianca.—Why, I am past my gamut long ago.
Hort.—Yet read the gamut of Hortensio.
(Bianca reads.)—*Gamut*, I am the ground of all accord—
A. *Re*—To plead Hortensio's passion,
B. *Mi*—Bianca, take him for thy lord,
C. *Fa ut*—That loves with all affection.
D. *Sol Re*—One cliff, two notes have I.
E. *La Mi*—Show pity, or I die."

On which she remarks:—

"Call you this gamut—tut—I like it not;
Old fashions please me best. I am not so nice,
To change true rules for odd inventions."

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Thus discouraged, the calculating lover turned his attention to the widow, with what success, and with what result you are aware *(Taming of the Shrew*, Act iii., sc. 1).

I have thus endeavoured to introduce to your notice the subject of the "Fine Arts," one fertile in topics of the rarest interest, each of the numerous departments of which is capable of supplying materials for many addresses to you, at once engaging and instructive. Indeed, the cultivation of these arts can be recommended on so many substantial grounds as contributing to human happiness, that the only difficulty is to select from the multitudinous instances in which they conduce to this end.

The idle, a small class I trust in this busy community, will confess that time not unfrequently hangs heavy on their hands, that the appetite for frivolous amusement is soon cloyed, and that satiety strips even change of its attractions.

Those engaged in constant active employment, or grave professional exertion, require some occupation subsidiary to the main object of their pursuit, some relaxation from the stretch of serious thought, some relief for the vacuity of those unemployed intervals which the severity of their avocations demands. And how can such hours be more profitably filled up, or in a mode more congenial to man's intellectual dignity, than in the culture of the "Fine Arts," which afford so pleasing an alternation to the mind, engaging it without fatigue in a new and agreeable field of investigation, slackening without unnerving its fibre, over-wrought by extreme tension; recruiting, by the diversion of the fancy and imagination, the exhausted powers of reason; moving the tenderest affections, and warming the most susceptible and delicate sympathies? How can we point to a more irreproachable amusement for hours of leisure, or to a more innocent substitute for the riotous indulgence in licentious pleasure, or the reckless and destructive gratification of pernicious passions, to which the thoughtless, the careless, or the ignorant will fly with the fallacious expectation that they will thereby shun the tediousness of life, and cast off the obnoxious burden which man is unto himself.

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Let me not, however, derogate from the unquestionable benefit to be derived from the discreet and moderate application to the study of these arts, by leading you to imagine that I propose an exclusive dedication to them.

Captivating and improving though they be, an excessive devotion at their shrine is as enervating to the masculine energy of the intellect as a temperate veneration is invigorating and ennobling.

He (of course I exclude professors) whose sole occupation is to trace from amidst the works of Sculpture and Painting the fancied portraiture of ideal beauty, and to test, by artificial rules, the various efforts made to reach absolute perfection in those arts, esteeming their productions only according to their correspondence with his arbitrary regulations, will with sensible men gain no higher reputation than that of an insignificant connoisseur. He who luxuriates altogether in the voluptuous impulses superinduced by Music, is prone to degenerate into a mere trifler; and he who is exclusively wrapt up in the fascination of Poetry, is apt to lose all energy and decision of character, and pass into a dreamy indistinctness of visionary existence.* But, on the other hand, what can give a greater charm to society than to find it (and more especially its fairer portion, whose influence is so extensive and efficacious in refining manners) capable of supplying rational and useful entertainment, and that the minds of those amongst whom we live, and with whom we converse, are exercised by such a graceful study, and endowed with a power of discriminating and approving what is genuine and correct in taste and intellectual and pure in morality.

It is moreover no slight cause of exultation on behalf of that branch of the "Fine Arts," on which I now address you, as well as those allied to them by what Cicero has happily termed "the cognate bond† of union," that while the power

* Vide Plato, *Republic* vi. 1–3; Milton *On Education*.

† Etenim omnes artes quæ ad humanitatem pertinent, habent quoddam commune vinculum, et quasi cognatione quadam inter se continentur.—*Cic. Orat. pro Arch. Poet.*

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of possessing the works of Architecture, Sculpture, and Painting is allowed only to the wealthy and the great, the enjoyment of the charms of MUSIC and POETRY is not denied to, and cannot be withheld from, the poor and humble; they address themselves, not to the ostentatious and the vain, but to the prudent and the wise; are accessible alike to all classes, all grades, and exhibit no capricious disinclination to enter, when cheerfully invited, either the sumptuous palace or the lowly cottage, the retired cloister or the murky dungeon; are not limited to any era, circumscribed within the confines of any State, or cut off by the jealousy of any distinctive creed; but interesting to all mankind, they can make for themselves a home in the uttermost corner of the earth, and adorn their resting place with all the elegancies and accomplishments which soften, humanise, and polish.

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APPENDIX I.

HAIL, holy light! offspring of heaven, first-born,
Or of the eternal co-eternal beam,
May I express thee unblamed? since God is light,
And never but in unapproached light,
Dwelt from eternity, dwelt then in thee,
Bright effluence of bright essence increate.
Or hear'st thou rather, pure ethereal stream,
Whose fountain who shall tell? Before the sun,
Before the heavens thou wert, and at the voice
Of God, as with a mantle, didst invest
The rising world of waters dark and deep,
Won from the void and formless infinite.
Thee I revisit now with bolder wing,
Escaped the Stygian pool, though long detained
In that obscure sojourn, while in my flight,
Through utter and through middle darkness borne,
With other notes than to the Orphean lyre,
I sung of chaos and eternal night,
Taught by the heavenly muse to venture down
The dark descent and up to re-ascend,
Though hard and rare; thee I revisit safe,
And feel thy sovereign vital lamp; but thou
Revisit'st not these eyes, that roll in vain
To find thy piercing ray, and find no dawn;
So thick a drop serene hath quenched their orbs,
Or dim suffusion veiled. Yet not the more
Cease I to wander where the muses haunt,
Clear spring, or shady grove, or sunny hill,
Smit with the love of sacred song; but chief
Thee, Sion, and the flowery brooks beneath,
That wash thy hallowed feet, and warbling flow,
Nightly I visit: nor sometimes forget
Those other two equalled with me in fate,
So were I equalled with them in renown,
Blind Thamyris, and blind Mæonides,

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And Tiresias and Phineus, prophets old :
Then feed on thoughts that voluntary move
Harmonious numbers ; as the wakeful bird
Sings darkling, and in shadiest covert hid,
Tunes her nocturnal note. Thus with the year
Seasons return ; but not to me returns
Day, or the sweet approach of e'en, or morn,
Or sight of vernal bloom, or summer's rose,
Or flocks, or herds, or human face divine ;
But cloud instead, and ever-during dark
Surrounds me, from the cheerful ways of men
Cut off ; and, for the book of knowledge fair,
Presented with a universal blank
Of Nature's works, to me expunged and rased,
And Wisdom at one entrance quite shut out.
So much the rather thou, celestial light,
Shine inward, and the mind, through all her powers,
Irradiate : there plant eyes, all mist from thence
Purge and disperse, that I may see and tell
Of things invisible to mortal sight.

Milton's Paradise Lost, Book III. 1–55.

O loss of sight, of thee I most complain ;
Blind among enemies, O worse than chains,
Dungeon, or beggary, or decrepit age !
Light, the prime work of God, to me is extinct,
And all her various objects of delight
Annull'd, which might in part my grief have eased.
Inferior to the vilest now become
Of man or worm : the vilest here excel me :
They creep, yet see : I dark in light, exposed
To daily fraud, contempt, abuse, and wrong,
Within doors, or without, still as a fool,
In power of others, never in my own ;
Scarce half I seem to live, dead more than half.
O dark, dark, dark, amid the blaze of noon,
Irrecoverably dark, total eclipse
Without all hope of day !
O first-created beam, and thou great Word,
"Let there be light, and light was over all,"
Why am I thus bereaved thy prime decree?
The sun to me is dark
And silent as the moon,
When she deserts the night,
Hid in her vacant interlunar cave.
Since light so necessary is to life,
And almost life itself, if it be true
That light is in the soul,

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She all in every part, why was the sight
To such a tender ball as the eye confined,
So obvious and so easy to be quench'd?
And not, as feeling, through all parts diffused,
That she might look at will through every pore?
Then had I not been thus exiled from light,
As in the land of darkness, yet in light,
To live a life half dead, a living death,
And buried: but, O yet more miserable!
Myself my sepulchre, a moving grave;
Buried, yet not exempt
By privilege of death and burial,
From worst of other evils, pains, and wrongs:
But made hereby obnoxious more
To all the miseries of life,
Life in captivity
Among inhuman foes.

Samson Agonistes, 67–109.

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APPENDIX II.

The wind instruments of the Romans were various.

ÆS signified usually a trumpet.

Martius ille æris rauci canor increpit et vox
Auditur fractos sonitus imitata tubarum.
Virg. Geo. iv. 71.

Dat signum specula Misenus ab alta
Ære cavo. *Virg. Æn.* iii. 239.

Misenum Æoliden; quo non præstantior alter
Ære ciere viros; Martemque accendere cantu.
Virg. Æn. vi. 164.

At tuba terribilem sonitum procul ære canoro
Increpuit. *Virg. Æn.* ix. 503.

Invadunt Martem clypeis atque ære sonoro.
Virg. Æn. xii. 712.

Ibunt semimares et inania tympana tundent
Æraque tinnitus ære repulsa dabunt.
Ovid. Fas. iv. 183.

Sed me sonus æris acuti
Terret. *Ovid. Fas.* iv. 189.

Clamor juvenilis et una
Femineæ voces impulsaque tympana palmis.
Ovid. Met. iv. 28.

Non illos Citharæ, non illos carmina vocum
Longave multifori delectat tibia buxi.
Ovid. Met. xii. 157.

ARUNDO.

Agrestem tenui meditabor arundine Musam.
Virg. Buc. vi. 8.

Pan ibi dum teneris jactat sua carmina nymphis
Et leve cerata modulatur arundine carmen.
Ovid. Met. xi. 153.

Sumptaque arundinibus compacta est fistula centum.
Ovid. Met. xiii. 784.

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Pastor inequali modulatur arundine carmen.
Ovid. Rem. Am. i. 181.

Tu canis umbrosi subter pineta Galæsi—
Thyrsin et attritis Daphnin arundinibus.
Prop. ii. 34, 67.

AVENA.

Tityre tu patulæ recubans sub tegmine fagi
Sylvestrem tenui Musam meditaris *avena*.
Virg. Buc. i. 1.

Carmina pastoris Siculi modulabor avena.
Virg. Buc. x. 51.

Hac agit, ut pastor, per devia rura capellas
Dum venit abductas et structis cantat avenis.
Ovid. Met. i. 676.

Tunc ego nec cithara poteram gaudere sonora
Nec similes chordis reddere voce sonos;
Sed perlucenti cantus meditabar *avena*
Ille ego Latonæ filius atque Jovis.
Tibul. iii., *Ec.* iv. 69.

Angusta cantare licet videaris avena
Dum tua multorum vincat avena tubas.
Mart. Ep. viii. 3, 22.

Sic rustica quondam
Fistula disparibus paulatim surgit avenis.
Ovid. Met. viii. 192.

Et satur arenti primum est modulatus avena
Carmen ut ornatos diceret ante Deos.
Tibul. II. i. 53.

BUXUS.

Tympana vos buxusque vocat Berecynthia Matris
Idææ.
Virg. Æn. ix. 619.

Prima terebrato per rara foramina buxo
Ut daret, effeci, tibia longa sonos.
Ovid. Fasti. vi. 697.

CALAMUS.

Ille meas errare boves, ut cernis, et ipsum,
Ludere quæ vellem calamo permisit agresti.
Virg. Buc. i. 9.

Pan primus calamos cera conjungere plures
Instituit; Pan curat oves, oviumque magistros
Nec te pœniteat calamo trivisse labellum.
Virg. Buc. ii. 32.

Tu calamos inflare leves, ego dicere versus.
Virg. Buc. v. 2.

—— Et calamo salientes ducere pisces.
Ovid. Met. iii. 587.

Nec calamis solum æquiparas sed voce magistrum.
Virg. Buc. v. 48.

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Dixerit ; Hos tibi dant calamos en accipe Musæ
Ascræo quos anteseni ; quibus ille solebat
Cantando rigidas deducere montibus ornos.
Virg. Buc. vi. 69.

Et me Pana tibi comitem de rupe vocato
Sive petas calamo præmia sive cane.
Prop. iii. 13, 45.

Capripedes calamo Panes hiante canent.
Prop. iii. 17, 34.

CONCHA.

Sed tum forte cava dum personat æquora concha
Demens et cantu vocat in certamina Divos, &c.
Virg. Æn. vi. 171.

Hunc vehit immanis Triton et cærula concha
Exterrens freta.
Virg. Æn. x. 209.

Nec maris ira manet, positoque tricuspide telo
Mulcet aquas rector pelagi : supraque profundum
Extantem, atque humeros innato murice tectum
Cæruleum Tritona vocat, *conchæque* sonaci
Inspirare jubet.
Ovid. Met. i. 330.

CORNU.

Ni tibi sit rauco prætoria clapica cornu
Flare nec donum cingere marte nemus. *Prop.* iii. 3-41.

Non tuba directi, non aeris cornua flexi
Non galeæ non ensis erant. *Ovid. Met.* i. 98.

Ni tibi sit rauco prætoria classica cornu
Flare nec Aonium cingere Marte nemus.
Prop. iii. 3, 41.

FISTULA.

Est mihi disparibus septem compacta cicutis
Fistula. *Virg. Buc.* ii. 36.

An mihi cantando victus non redderet ille
Quem mea carminibus meruisset fistula caprum ?
Virg. Buc. iii. 21.

Utcumque dulci Tyndari fistula
Valles.
Hor. Car. i. 17, 10.

Dicunt in tenero gramine pinguium
Custodes ovium carmina fistula.
Hor. Car. iv, 12, 9.

Hic arguta sacra pendebit fistula pinu.
Virg. Buc. vii. 24.

——— dum despicis omnes
Dumque tibi est odio mea fistula.
Virg. Buc. viii. 32.

——— o mihi tum quam molliter ossa quiescant
Vestra meos olim si fistula dicat amores.
Virg. Buc. x. 33.

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Quid me compactum ceris et arundine rides?
Quæ primum structa est fistula, talis erat.
Mart. xiv. 63.

LOTOS.

Cum fugeret Phrygias trans æquora Marsya Crenas
Mygdoniam Phœbi superatus pectine Loton.
Sil. Ital. viii. 503.

See the interesting metamorphosis of the nymph Dryope into a Lotus tree, as well as of the nymph Lotis when pursued by Priapus.
Ovid. Meta. ix. 330.

Terret, et horrendo lotos adunca sono.
Ovid. Fasti, iv. 190.

Ut strepit assidue Phrygiam ad Nilotica loton
Memphis Amyclæo passim lasciva Canopo.
Sil. Ital. lib. xi. 430.

Terga premit pecoris geminis Amor aureus alis;
Palladius tenero lotos ab ore sonat.
Mart. viii. 51, 13.

STIPULA.

Cantando tu illum? aut unquam fistula cera
Juncta fuit? Non tu in triviis, indocte, solebas
Stridenti miserum Stipula disperdere carmen?
Virg. Buc. iii. 25.

SYRINX.

Nymphæ Syringa vocabant. *Ovid. Meta.* i. 691.
Inter Hamadryades celeberrima Nonacrinas
Naïas una fuit. Nymphæ Syringa vocabant.
* * * * * *
Panaque, cum prensam sibi jam Syringa putaret,
Corpore pro nymphæ cannas tenuisse palustres.
* * * * * *
Atque ita, disparibus calamis compagine ceræ
Inter se junctis nomen tenuisse puellæ.
Ovid. Met. i. 690, 705, 711.

TIBIA.

Incipe Menalios mecum mea tibia versus.
Virg. Buc. viii. 21.

O vere Phrygiæ, neque enim Phryges, ite per alta
Dindyma; ubi assuetis biforem dat tibia cantum.
Virg. Æn. ix. 617.

At non in Venerem segnes nocturnaque bella
Aut ubi curva choros indixit tibia Bacchi
Expectare dapes et plenæ pocula mensæ.
Virg. Æn. xi. 736.

Quem virum aut heroa Lyra vel acri
Tibia sumis celebrare Clio? *Hor. Od.* i. xii. 1.
Descende cœlo et dic age tibia
Regina longum Calliope melos
Seu voce nunc mavis acuta
Seu fidibus citharave Phœbi. *Hor. Od.* iii. iv. 1.

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Neque in vias
Sub cantu querulæ despice tibiæ.
Hor. Od. iii., vii. 29.

Cur Berecyntiæ
Cessant flamina tibiæ? *Hor. Od.* iii. 19, 18.

Lyræque et Berecyntiæ
Delectabere tibiæ.
Mistis carminibus non sine fistula.
Hor. Od. iv. 1, 22.

Tibia non, ut nunc orichalco vincta tubæque
Æmula, sed tenuis simplexque foramine pauco.
Hor. Ars Poet. 202.

Memoratrix tibia pugnæ
Eoæ. *Val. Flacc.* 6, 142.

Barbaraque horribili stridebat tibia cantu.
Catull. lxiv. 265.

Ah mea tum quales faceret tibi tibia cantus
Tibia funesta tristior illa tuba.
Prop. ii. 7, 11.

Hic locus est in quo tibia docta sones.
Prop. ii. 30, 16.

Music was either for *tibiis imparibus*, with two pipes, in the same mode; *tibiis imparibus*, in different modes. *Tibia duabus dextris*, two pipes of low pitch. *Tibia duabus sinistris*, two pipes of high pitch. *Tibiis paribus dextris et sinistris*, pipes in the same mode of high and low pitch.

It was usual for a performer to play on two at once (Cor. Nepos, xv. 2, s. 1). They were in such case sometimes of different lengths, octaves to each other; sometimes of equal lengths, in unison. Those of unequal length, called dextra and sinistra, were styled by Herod. i. 17, male and female, *i.e.* bass and treble, corresponding to the ordinary sexual difference in the human voice. The Tibia dextra led, and was called incentiva; sinistra followed, and was called subcentiva.

Vide Livy, lib. ix. cap. xxx., where he mentions that the flute-players, being prohibited by the censors from holding their repasts in the Temple of Jupiter, went off in a body to Tibur, and that there was not one left in the city to play at the sacrifices. The Tiburtines put a trick on them, made them all drunk, and then drove them in carts and waggons back to Rome. There they awoke to sobriety and a sense of their duty, and took to fifing again with due subordination to the Pontifex Maximus.

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LECTURE

ON

ARCHITECTURE, SCULPTURE AND PAINTING,

DELIVERED AT THE

MELBOURNE MECHANICS' INSTITUTION,

ON THE 8TH SEPTEMBER, 1847,

BY

REDMOND BARRY, ESQ., BARRISTER-AT-LAW.

14117

MELBOURNE:
MASON, FIRTH & M'CUTCHEON, GENERAL PRINTERS,
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ARCHITECTURE,

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LECTURE

ON

ARCHITECTURE, SCULPTURE & PAINTING.

"And let there be a fountain, or some faire work of Statuas, in the middest of this Court."—BACON, ESSAY ON BUILDING.

"Prepare
To see the life as lively mock'd, as ever
Still sleep mock'd death."—
WINTER'S TALE, Act 5, Scene 3.

"Painting is welcome.
The painting is almost the natural man."—
TIMON OF ATHENS, Act 1, Scene 1.

LADIES AND GENTLEMEN,

The subject I have the honour to propose for your consideration this evening, is that department of the Fine Arts which embraces Architecture, Painting, and Sculpture; the successful study and prosecution of which have in combination with other polite sciences led to the refinement of the human mind, the embellishment of those localities in which mankind congregates, the adornment of the habitations of man, and the perpetuation of the most pleasing representations of the works of nature, or of the creations of the imagination.

True it is that if we admit the narrow mode of reasoning of the unenlightened vulgar, that the objects which these arts produce are capable of serving no other purpose than of affording a momentary gratification to the external senses of the beholder, or perhaps of awakening the transient recollection of some agreeable image which has faded from the memory, there may be some force in the pathetic lamentation of those, who, unable to discover in them any other source of enjoyment, deplore the time lost, money lavished, and labour expended, in the completion of those choice specimens of ingenuity, with which the public places, temples, palaces, and private dwellings of the people of ancient and modern times have been filled; and who condemn those engaged in the execution of them as well as

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their supporters, for bestowing so much thought upon objects virtually so unimportant.

But should views so illiberal pervade the society of which we are members, were all our rules of approbation based upon the abstract question of practical utility, and on that alone; should we be always prone to exclaim as Anaxagoras of Clazomene did when he beheld the Mausoleum, "Here is a vast quantity of money turned into stone," there would then exist but few degrees of approbation to offer to the respective performances of the untutored native of Australia, who piles together a few branches to shelter him from the storm, and of a Palladio or a Raphael D'Urbino, who invested with a wondrous magnificence the cities of Venice and Rome. We should contemplate with equal indifference the monstrous deformities of Pagan idolatry—the mis-shapen divinity of the South Sea Islander—the unsightly Brahma,

"Moloch, horrid king, besmeared with blood of human sacrifice,"

and the playful archness of a Cupid, the winning loveliness of a Venus, the majestic grandeur of a Jupiter Olympius, the pious tenderness of a Madonna, the rapt inspiration of a St. Cecilia, or the divine resignation of a Redeemer.

Then, indeed, we might put a strict interpretation on the words of Comus—

"If all the world
Should in a fit of temp'rance feed on pulse,
Drink the clear stream, and nothing wear but frieze—
The Allgiver would be unthank'd—would be unprais'd—
Not half His riches known, and yet despis'd;
And we should serve him as a grudging master,
As a penurious niggard of his wealth—
And live like nature's bastards, not her sons;
Who would be quite surcharg'd with her own weight,
And strangled with her waste fertility."

This rigid mode of regarding the subject would, moreover, exclude many of those numerous distinctions growing out of the constitution of the human mind, in its progressive state of advancement, and applying constantly the unvarying query of "whether the undertaking be *practically* useful or not"—that is in a mechanical or exchangeable point of view—without due regard to that philosophical or social utility which, like the delicate and complicated works of a piece of mechanism, produces all the combinations of harmony by unseen operations—we should banish from our vocabulary the terms lovely, odious, honourable, disgraceful, noble, mean, and consequently remain insensible to the complex ideas these words represent.

Fortunately, however, it is otherwise; our views are not solely limited to the gratification of the external senses, nor

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bounded by such selfish and sordid considerations of utility. We may be permitted to allow our vision a wider field, our thoughts a more expansive range; and to behold the Fine Arts, as the instruments of civilisation, and the handmaidens of refinement; to admire the splendour of their works as symbols of human prosperity; and to respect the renowned masters of Architecture, Sculpture and Painting, as ministers of the social virtues.

These arts are also entitled to consideration from the relation they bear to others. The disposition of the materials of building in a straight or rectangular arrangement, as mere necessity may enjoin, bespeaks no more skill than the vulgar collocation of words in conversation respecting the usual occurrences of ordinary life; but the higher and nobler style of adapting these materials *with a view* to beauty and magnificence of structure and unity of design which is the study of the architect, bears a legitimate comparison in effect to the dignity, sublimity, and harmony to which the artificers of language have advanced those compositions which are the boast of literature; and the excellent productions of the sculptor and painter, which so immeasurably surpass the first rude attempts at delineation and imitation, may be said by a similar and not inappropriate reasoning to claim affinity with the refined and kindred performances of the poet and musician. Such a parallel has been indeed instituted by Simonides and Horace, the first of whom said that "A picture is a silent poem, and a poem a speaking picture;" the latter, "As is a painting so is a poem."* "There are some which if you stand close to them will captivate you to a greater degree, and others, if you remove yourself farther from them. This loves a darkened position, that which fears not the critic's subtle discrimination desires to be exhibited in a strong light. The one has pleased once, the other will delight if ten times repeated."

The resemblance is still more strongly insisted on by another writer†, who says—

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* *Ut pictura poesis: erit quæ si propius stes*
Te capiat magis et quædam si longius abstes.
—Hor. Ars. Poet. 361.

† There is necessary in both the same glowing enthusiastic fancy, to go in search of materials, and the same cool judgment is necessary in combining them. They collect from the same objects the same result. An abstract picture of each must be formed in the mind, as they are equally to be addressed to the same passions in the hearer and spectator. The scope and design of each is to raise ideas in the mind of such great virtues and noble actions as move, delight, and instruct.—*Barry on the Arts.*

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Architecture, on the other hand, should possess fitness, proportion, harmony, the result of which is that repose which the mind feels from absence of a want. Construction should be decorative. Decoration should never be purposely decorative.

In the culture of these sciences, which must have originated as soon as man emerged from mere communion with the beasts of the field, it may be fairly presumed that Architecture took the lead; for many of its most remarkable works are beyond the reach of positive chronological information; and reasoning from the analogy afforded by the habits of the simple and primitive nations discovered within the last three centuries, we may be justified in saying that as with them, so with the more ancient, superstitious or devotional feelings led them to the execution of combined efforts in Architecture, which far exceeded any attempted for personal accommodation.

In Mexico and Peru, and other parts of the western side of the continent of America, solid structures of vast proportions, some of elaborate workmanship, have been discovered, dedicated, as it is supposed, to the offices of religious veneration; so in India, Assyria and Chaldæa, Egypt, Greece, Italy, Gaul, and Britain, the remains of architectural performances reared for devotional purposes are still to be found, the antiquity of which has baffled the research of the most inquisitive; while nothing has been found to testify that the habitations of the kings or nobles of a coeval period were constructed on a corresponding scale.

In these buildings, erected in the infancy of science, as might naturally be expected, convenience and elegance were either unknown or disregarded; the apparent desire being rather to astonish the mind by their magnitude, than to please the eye by their regularity; and as the Asiatic nations, Egyptians, and Greeks were unacquainted with the mode of constructing, or at least did not build any arches until a late period, the roofs of the vast halls of early ages were flat and covered with prodigious stones, the supporting columns were raised without proportion and decorated without grace; and the style of their barbaric ostentation was devoid of what we now call *taste*.

We are informed by the sacred writings, the most ancient records now extant amongst us, that the dispersion of the human family, before that time "of one language and one speech," took place in consequence of the confusion of tongues inflicted on the Babylonians as a punishment for their arrogance in undertaking to build a tower whose top might reach unto Heaven.

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This gigantic building, allowing for the metaphorical language of the narration, must have been of stupendous dimensions, and was the precursor of the many remarkable undertakings which rendered Assyria, Chaldæa, and Egypt, so renowned in the earliest times, and which from their grandeur and extent caused their cities to be the wonders, not only of the people of their own era, but also of an admiring posterity.

Egypt, which disputes with other countries the discovery and practice of letters, and the occult and exact sciences—though perhaps she derived them from Ethiopia or India—and whose Priests, with the Chaldæans, carried on their astronomical observations with extraordinary skill, from a period most remote, in addition to the countless temples and hierarchical edifices, the ruins of which attest the wonderful energy of her surprising people—presents us also with her labyrinthine catacombs, her tombs, her colossal statues, and monolithic obelisks,* and those unaccountable works the huge pyramids, the solidity of which has withstood the convulsions of nature and the eroding tooth of time.

Denon says of the latter—

"If we reflect upon these pyramids we shall be disposed to consider the pride that constructed them greater than these masses themselves. None but sacerdotal despots would ever have undertaken, and none but a stupid, fanatical people would have completed them. The most honourable reason that can be assigned for their erection is the emulation of man to excel the works of nature in immensity and duration: and in the project he has not been altogether unsuccessful; the hills near the pyramids are not so lofty, and have suffered more from time than the pyramids themselves."

To convey an idea of the nature of some of these works and of the labour employed in their completion, let me extract a passage from Herodotus, who wrote from information he received when he visited Egypt, about 460 years before the Christian era.

In describing the toils which King Cheops caused his subjects to undergo, he says—

"Some he compelled to hew stones in the quarries of the Arabian mountains, and drag them to the banks of the Nile; others were appointed to receive them and transport them to a mountain in Lybia. One hundred thousand men were

* Insignificant though they be when compared with the granitic Shaft at Duc, in Switzerland, or the remarkable Ninepin Rock in the Island of Trinidad—860 feet high.—*Ross' Voyages*, vol. 1.

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employed in this service, who were relieved every three months."

"Ten years were consumed in forming the road on which these stones were drawn, a work, in my estimation, of no less fatigue and difficulty than the pyramid itself, the completion of which occupied twenty years: upon the outside were inscribed, in ordinary Egyptian characters, the various sums of money expended during the progress of the work in supplying radishes, onions, and garlic, for the labourers. This, as I well remember," he continues, "my interpreter informed me, amounted to no less than 1060 talents," or about £1,122,000 of English money.

He concludes with this remark—

"If this be true, how much more must it have necessarily cost for iron tools, food, and clothing, particularly when we remember the length of time they were employed at the building itself; adding what was spent in hewing and conveying the stones, and constructing the subterranean apartments, intended as a place of interment for the King."

The dimensions of this enormous work have been stated by different writers, with a most unaccountable variance, from that of Herodotus, who tells us it was 80 plethra or 800 feet square at the base, and as many plethra or 800 feet high, to those of Strabo, Diodorus Siculus, Pliny, of the ancients; Le Brun, Alpinius, Thevenot, Niebuhr, and Greaves, of the moderns; the last of whom reduces the base to a square of 444 feet, and the height to 648. Monsieur Nouet who joined the commission of French Savans, with Denon and Champollion, at the time of the occupation of Egypt by Napoleon, gives to the base from actual measurement a square of 768 English feet, an area nearly equal to that of Lincolns Inn Fields in London, and estimates the height at 452 feet, or a third more than that of St. Paul's Cathedral. One mode of accounting for these different admeasurements is that having been taken at different periods, between which the sand has been accumulating and shifting round the pyramid, the dimensions exposed above ground have been gradually altered.

But, while the travellers in Egypt, both of olden and modern ages, concur in detailing the almost interminable succession of the ruins of temples and stately buildings, until the mind becomes confused and the reader incredulous: we find no mention of walls or fortifications encircling the cities (for of the hundred gates of Thebes, so celebrated in poetry, not a vestige remains, and as ruins much anterior in date to that ascribed to them are found, we may doubt the authen-

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ticity of the accounts); no allusion—at least until the time of the Emperor Probus about A.D. 270—is made to quays, baths, bridges, or theatres, hospitals for the sick, or houses of refuge for the aged and infirm; nor do we discover anything to remove the impression that while her kings squandered so much human life and treasure on buildings, the ruins of which are still to be seen, they were inattentive to many of those matters which the polished nations of the present day consider of perhaps paramount importance, and indifferent about the comfort and convenience of their subjects.

Indeed, we may adopt the exclamation of the poet Thomson—

> "Instead of useful works, like nature; great,
> Enormous, cruel wonders crushed the land:
> And round a tyrant's tomb, who none deserved,
> For one vile carcass, perish'd countless lives."
>
> —"Liberty."

Byron also sarcastically observes—

> "What are the hopes of man? Old Egypt's King,
> Cheops, erected the first pyramid
> And largest; thinking it was just the thing
> To keep his mem'ry whole and mummy hid;
> But somebody or other rummaging,
> Burglariously broke his coffin's lid.
> Let not a monument give you or me hopes,
> Since not a pinch of dust remains of Cheops."

It was not until Egypt was governed by Ptolemy Soter*, one of the lieutenants of Alexander the Great, to whose lot that country fell on the division of the empire, that the polite sciences re-visited their cradle, and found at the Court of the Egyptian monarch protection and encouragement.

He commenced the formation of a library†, which ultimately

---

* The dynasty of the Ptolemies, descendants of the son of Lagus, one of the most favoured of the officers of Alexander the Great, ruled for nearly 300 years:—

B.C.		B.C.	
323.	Ptolemy Soter, I.	81.	Ptolemy Alexander II., X. and Cleopatra II.
285.	——— Philadelphus, II.	80.	Auletes deposed by
247.	——— Euergetes, III.	58.	Berenice, XI. Tryphena
222.	——— Philopater, IV.	55.	Auletes restored
205.	——— Epiphanes, V.	51.	Cleopatra III. and her brother Ptolemy XII.
181.	——— Philometor, VI. by his brother	47.	Ptolemy XIII.
146.	——— Physcon, VII.	30.	Egypt became a Roman Imperial Province.
117.	——— Soter II., VIII. by his brother		
107.	——— Alexander I., IX. & their mother Cleopatra		
89.	——— Soter II. restored		

† This was called "the mother;" that which succeeded it, called "the daughter," collected during seven centuries, was destroyed by direction of the Caliph Omar, on the taking of Alexandria by the Arabs A.D. 642. The books were used to heat the public baths, and served for fuel during the space of six months.

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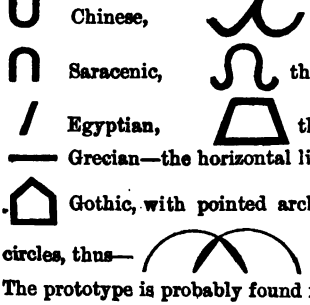
contained 700,000 volumes; and which, to the infinite grief of the learned, was destroyed by fire when Julius Cæsar was besieged in Alexandria, B.C. 47.

He gave up a portion of his palace to the use of a society of learned men, and established a Museum, the first of its kind; the members of which, maintained at the public expense, were employed in philosophical researches. His son, Ptolemy Philadelphus, or the brother lover—as he was ironically called, having put two of his brothers to death)—was, notwithstanding, a liberal supporter of the institution, founded by his father. Many years after this, on the destruction by the Romans of the Achæan League, which had existed for 130 years, and which was supported to the last by the virtues and ability of Aratus and Philopœmen, styled the last of the Greeks, the artists expelled from Greece by the arms of the Conqueror, distributed themselves in foreign lands, and many took refuge in Egypt.

It is then in Greece, after the first rude attempt at what has been termed the Cyclopæan style, that the permanent fundamental rules of the science of architecture were first laid; and it is to Greece in her three countries of Doris, Ionia, and Corinth, that we owe the three orders which thence take their names*.

The first† was adopted in consequence of Dorus, son of Hellen and the Nymph Orseis, and grandson of Deucalion, having caused a temple to be erected at Argos in honour of Juno, the proportions of which appeared so agreeable that they were adopted as the model to which the Dorians conformed in the construction of other edifices. The chief *desideratum* was to impart to the columns sufficient strength to support the building and at the same time not to offend

* It has been suggested that the origin of five distinct national types of architecture may be traced to the following different forms or lines in combination :—



U Chinese, resembling the Tartar tent,

∩ Saracenic, the Horse-shoe,

/ Egyptian, the line inclined from the perpendicular,

— Grecian—the horizontal lintel,

Gothic, with pointed arch, formed by the intersection of two circles, thus—

† The prototype is probably found in Egypt, though without a plinth, or base.

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the eye by their thickness. To accomplish this object, the architect adopted the same proportion as that found to exist between the foot of a man and the rest of his body—the foot being in general one-sixth of the height of a well-formed man—and the altitude of the Doric column was thus originally six times its diameter, though at a subsequent period a seventh diameter was added to its height.

The second owed its origin to the Ionians, colonists sent from Greece to Asia Minor, under the conduct of Ion, son of Xuthus, and grandson of Hellen.

Accordingly as the industry of these enterprising people was remunerated by the acquisition of wealth, they endeavoured to display still more elegance and delicacy in their edifices than had been bestowed on those of their ancestors; and it was on the occasion of the building of a temple of Diana, to which they gave the name of Pan-Ionium, that attempts were made to improve on the simplicity of the Doric order.

The Ionians, like the Dorians, employed the proportions of the human frame as the model of the composition of their order; but instead of selecting the figure of a man, they, with a judgment which none can venture to dispute, preferred the symmetry of the female form.

To render the columns of their design more pleasing, they gave them a height of eight times their diameter; and imitating the folds of a woman's robe, they fluted the trunk of the pillar—though the credit of this invention is disputed—while the volutes of the chapiter were made to represent the hair which hangs in curls on each side of the face. To give a still greater elevation, they added to their column, in imitation of the sandal, a base resembling twisted cords.

The capital of the Corinthian order was the happy effort of genius seizing upon a fortuitous occurrence, which many persons of ordinary character would have passed unobserved.

A young maiden, of noble family at Corinth, died; and with the piety which dictated such offices, her friends offered on her tomb flowers and simple donatives, emblems at once of her purity and the brevity of her existence. A basket containing some of these offerings, covered with a flat tile, was placed by the foot of the tomb, where grew an acanthus; the leaves of this plant sprung up, encircled the basket, and as the leaves ascended they reached the overhanging edge of the tile, which arrested their upward progress, and made them bend and curl in a manner fanciful and graceful.

This was seen by Callimachus, the sculptor, and, struck

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with the novelty of the combination, it gave him the idea of a new and lofty Capital to supersede the Ionic. His design having been subsequently put into execution, it met with universal approbation.

This, notwithstanding the doubts and conjectures of many learned antiquarians, appears to be a reasonable account of the rise of these three orders; it has been adopted by the poet, who thus characterises them—

"First unadorned
And nobly plain the *manly* Doric rose;
The Ionic then with decent *matron* grace
Her airy pillar heaved; luxuriant last
The rich Corinthian spread her wanton wreath,
The whole so measured true, so lessened off
By fine proportion; that the marble pile,
Formed to repel the still or stormy waste
Of rolling ages, light as fabrics looked
That form the magic wand aërial rise.

—THOMSON'S "Liberty."

In addition to these orders the Greeks on some occasions made use of an anomalous description of architecture called Caryatic.

The Athenians having after a protracted siege reduced Carya or Carias, a city of the Peloponnesus, the inhabitants of which had taken the part of the Persians, they put the males to the sword, led the females into captivity, and to commemorate their triumph erected buildings, the columns of which were made to represent women, dressed in the manner of the Caryatides.

Others present us with a different derivation for the adoption of the style, which is that the statues are intended to represent the figures, *not* of captives, or persons in a state of ignominy, *but* of the virgins who celebrated the worship of Diana Caryatis, and were originally employed in the temples of that goddess.

The most celebrated of the numerous Temples of Diana was at Ephesus, designed by Ctesiphon and his son Metagenes, though not completed for 220 years, the adornment of which employed the most renowned statuaries, and caused honourable contention between the rival artists.

It contained 127 columns of marble, 60 feet (some authors say 70 feet) high, presented by Kings and Princes. Four pillars were required to complete the number in the plan, and the majesty of the temple demanded that none but those of the most exquisite workmanship should be admitted.

Accordingly, as on a former occasion—on the building of the sepulchre reared by Queen Artemisia in the city of Halicarnassus, the capital of Caria, to her brother and husband

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Mausolus, styled on account of its magnificence the "Mausoleum"—several illustrious competitors shared the glory of the work: Satyrus and Phileus having furnished the plan, Scopas undertaking the execution of the east side, Timotheus of the south, Leochares of the west, and Bryaxis of the north, the centre and top being finished by Demetrius and Pæonius the Ephesian. So the execution of this work was entrusted to Praxiteles, Polycrates, Ctesilas, and Cylon, the most celebrated sculptors of the age, each of whom undertook to complete one column.

When completed, it was considered either impossible or invidious to declare which was the most perfect, and at last an expedient was devised, which removed from the people the difficulty and the odium of deciding.

The artists were themselves requested to pronounce on the relative merits of their respective performances. Each gave himself the first place, and afterwards named in succession him whom he considered to have succeeded best. The precedence was by this means allowed according to the majority of suffrages, and to Praxiteles was accorded the first place, to Polycrates the second, and to Ctesilas and Cylon the other two.

This temple, which was ranked amongst the wonders of ancient art, was seven times re-built; and that which I now allude to was erected after that destroyed on the night that Alexander the Great was born (B.C. 355) had been set fire to by a fanatical creature named Erostratus, actuated by a morbid desire to obtain for himself an unenviable notoriety—similar to that impulse which, in our time, prompted the unfortunate Martin to set fire to the Minster of York—which, notwithstanding a decree of the Common Council of Asia forbidding any person to use his name, he has, according to his expectation, gained.

To the remaining two well-known orders of *Ancient Architecture*, the Tuscan and Composite, Italy gave birth.

The first of these is, of all orders, the most simple and least ornamented, and evinces but little taste. It possesses, as a chief merit, great solidity, and is characteristic of the times when it was first brought into use, when the rustic Consuls and Dictators of Rome neither esteemed nor cultivated any arts but those subservient to or productive of the necessaries of life.

It was not until the Roman armies were successful, under Marcellus, Scipio, Flaminius, and Paulus Æmilius—to the last of whom Macedonia yielded up treasures so enormous that the people of the commonwealth were exempted from

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all taxes until the Consulate of Hirtius and Pansa, 125 years after—and until the taking of Corinth by Mummius, Sicyon by Scaurus, and Athens by Sylla—when Rome beheld with transport the paintings and statues in marble, ivory, and the precious metals which had embellished the temples and public places of Syracuse, Asia, Macedonia, Corinth, Attica, and Bœotia—that their stern conquerors discerned the beauties, studied the excellencies, and appreciated the value of the productions of the Fine Arts.

Indeed, Mummius, so renowned for his Grecian conquests as to have acquired the name of "Achaicus," was so absolutely destitute of knowledge of the worth of the pictures and statues of which he obtained possession by his victorious arms, that he informed the persons he employed to convey them from Corinth to Rome, that if they lost or injured any of them, they should make others in their stead.*

At this era it was, as Horace admits, that "Captive Greece subjugated her unpolished conqueror, and introduced the arts into rustic Latium.†"

Imbued with a new spirit, the sturdy republicans applied themselves to improve upon their unattractive architecture, and, combining the graces of the Ionic and Corinthian orders, they gave to the world the order which from the circumstance is styled *Composite.*

However, their most exquisite poet, Virgil, confesses that even in the Augustan age—though Augustus said that he found Rome thatched and left it marble—the Romans were unable to compete successfully with the Greeks in aught but the arts of war and government. Yielding to them in the arts of which we now treat, he says—

> "*Excudent alii spirantia mollius æra*
> *Credo equidem; vivos ducent, de marmore vultus;*
> *Orabunt causas melius, cœlique meatus*
> *Describent radio, et surgentia sidera dicent,*
> *Tu regere imperio populos, Romane memento,*
> *Hæ tibi erunt artes; pacisque imponere morem,*
> *Parcere subjectis et debellare superbos.*"

Which I may venture to translate thus—

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*For an anecdote respecting the ignorance of Mummius—*Vide Strabo p. 8, Plin.* I. 354—a picture of Bacchus, by Aristides, sold to King Attalus for a large sum of money, was found amongst the plunder of Corinth; and so little regarded by the Roman soldiers had it been, that some of them used it as a table on which to play at dice. Mummius was so astonished at the vast price given for it that, suspecting there was some magic in it, he took it away from King Attalus, and put it in the Temple of Ceres at Rome.

† *Græcia capta ferum Victorem cepit, et artes*
Intulit agresti Latio.

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"Others, methinks, may with superior art
To breathing brass the human form impart;
The living lineaments in marble trace,
Or causes plead with more persuasive grace;
Mark with a wand the motions of the sky,
And name the planets as they rise on high.
Remember, Roman! *these*, thine arts, I say—
To govern nations with imperial sway,
To fix the rule of peace on basis true—
The conquered spare, the haughty foe subdue."

Or, according to Ovid—

"*Nondum tradideras victas victoribus artes*
Græcia facundum sed male forte genus.
Qui bene pugnarat Romanam noverat artem:
Mittere qui poterat pila disertus erat."
—*Fasti*, *Lib.* III., 101.

As Story, the distinguished American jurist, observes—"The Fine Arts, for instance—Painting, Music, Poetry, Sculpture, Architecture—seem almost the necessary accompaniments of a state of high civilisation; they are not only the grace and ornament of society, but they are intimately connected with its solid comforts. If they did no more than gratify our tastes, increase our circle of innocent enjoyment, warm our imaginations, or refine our feelings, they might fairly be deemed public blessings. But who is so careless as not to perceive that they not only give encouragement to men of genius, but employment to whole classes in the subordinate arts? They not only create a demand for labour, but make that very labour a means of subsistence to many who must otherwise be idle and indolent, or, by pressing upon other business, sink the compensation for labour by a ruinous competition to its minimum price."

The Composite order, employed at a later stage of Roman history, may be considered a variety of the Corinthian, corresponding with it in the height of the column and of the parts of the entablature in the capital.

The volutes and pomegranate of the Ionic were combined with the acanthus of the Corinthian.

At a still later period the bold leaves of the Assyrian and Persian styles were introduced above the base, modified so as to correspond with those introduced into the capital.

It is apparent that the nature of the national religious observances and ritual caused a material difference in the style of architecture.

In the paganism of Egyptian worship processions were the characteristic. The approaches to the temples were accordingly lined with rows of obelisks, sphinxes, and figures of strange creatures. Between these the congregation moved with reverent solemnity to the temples. These,

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at once massive, solid, and simple, imparted ideas of the unchangeable nature of the religious ideas.

In that of Greece the sacred rites were conducted within the temple by the priests alone, the people were not admitted. They assembled round the outside, and sheltered themselves under the porticoes.

With the effects required for such ceremonials in view, the architects devoted their attention mainly to the exteriors, and lavished on them the highest achievements of their skill; they were either roofless or partially open at the top. Inside the horizontal architraves rested on columns, and the interiors, although enlivened by sculpture and colour*, did not produce a particularly striking effect.

Christianity, as it established itself and became tardily recognised by the authority of Constantine, was enabled to induce its votaries to emerge from the catacombs and secret places in which their religious exercises had been previously performed, and to admit them to the basilicas—places of worship assigned to them—or which they were permitted to erect. An abundant admission of light gave rise to increased and progressive attention to augment the height of the churches, to improve the architectural accessories, and provide for the convenience of the congregations.

It is found that the Egyptians used decorative architecture only in their temples, palaces, and tombs. The Greeks confined theirs chiefly to temples, public buildings, theatres, and halls. The Romans, enriched by foreign conquests, and instructed in the arts practiced by different nations subdued by them, amplified its domain.

They applied the skill of the architect to adorn not only their temples and theatres, but also their triumphal arches, amphitheatres, basilicas, and baths; their aqueducts, gates, and bridges; the pillars which marked the fields of victory or the limits of their empire. They also produced the innovation of building story over story. They pierced the walls of each with round arched† windows, and placed the orders one above the other usually, but not invariably, in accordance with their solidity and strength. They decorated each with statues, on pedestals or in niches, corresponding in character with the style. The Doric with robust male

* Colour is used to assist the development of form, distinguishing objects or parts of objects. Primary colours should be placed on the upper portions of objects, secondary and tertiary on the lower portions. Colour has tone, shade hue. Blue retires on concave surfaces, yellow advances.

† The arch was known to the Egyptians and to the Greeks, but not employed by them in their public buildings.

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figures of Æsculapius, Hercules, Jupiter, Mars. The light and graceful, as of Apollo, Bacchus, were appropriated to the Ionic. Those of a still more refined and delicate nature, as of Ceres, Flora, Venus, to the Corinthian.

This treatment was extended to the private dwellings of the wealthy.

When Constantine A.D. 330 removed the seat of empire from Rome to Byzantium—after that event called Constantinople—a distinctive type of architecture arose. It consisted in a fusion of the Romanesque and Oriental. The dome of the latter was enlarged in elliptic form, and better illuminated than that of Italy.

In the progress of time, until the reign of Justinian, the projecting members of the capitals of the Greek and Roman columns and cornices were effaced, and represented by incised carvings on a flat surface; and finally most of the leading features of the orders were obliterated*.

The Lombard style succeeded. It is in features heavy, cumbersome, and uncouth—the offspring of northern ignorance and of the decadence of Byzantine art.

During several centuries of anarchy and confusion in Europe nothing worthy of notice marks the progress of architecture. The Arabs brought with them into Spain a system which, after the tenth century, expanded ultimately into the graceful and richly ornamented style exemplified in the Alhambra of Granada and the sumptuous mosques and palaces scattered over their possessions in the Peninsula.

The low and ponderous Anglo-Saxon, with rounded arches, was followed by the more lofty, but solid and imposing, Norman—found in England, and throughout the portions of Europe in which the victorious arms of that nation were carried as far south as Sicily.

This gave way to the Gothic, which has been distributed

* A modern writer accounts for the origin of the Turkish symbol of the crescent in support of the legend BTZANTINH, ΣΩΤ—the Saviour of Byzantium—though he cites no authority. He says that "Philip of Macedon besieged the city and fixed upon a cloudy night to make the assault. As the troops were advancing to storm the ramparts the new moon shone forth and disclosed their approach. This enabled the inhabitants to observe and repulse the enemy. To commemorate the event the crescent was adopted as the civic symbol. When the Turks took Constantinople A.D. 1453 they found this ancient badge set up in many places. Supposing it possessed some magical influence, they assumed it and placed it in the field of their ensign."—*Pinkerton on Medals*, Vol. I., 193. The use of the crescent is confined to the sections of the human family which embraced the religion of Mahomet inhabiting the Turkish Empire. The symbol of the Persians is the Lion, of the Egyptians the Eagle. To the Arabs, to the Saracens of Asia, the Moors of Africa, and to the invaders of Spain and their descendants—the Moriscoes—it was unknown.

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in England into Romanesque*, Anglo-Saxon, Norman†, Primary Gothic, Early English or Lancet‡, Secondary Rayonnant or Ornamented English§, and Tertiary Flamboyant Perpendicular or Florid English or Tudor‖. It is strikingly different from the preceding European orders by its loftiness, by the attenuated reeded columns bound together in groups, and the multiplication of gracefully elongated arches. The "storied windows," flooding the naves and aisles with brilliant or coloured and subdued light, and giving an endless variety of perspective, are eminently calculated to arouse the devotional feelings and elevate the pious sentiments of those admitted to assist in the celebration of the sacred services.

In Italy sprung up a sumptuous and dignified style for Palatial buildings, but they were not free from faults, both in construction and adornment. Thus amongst the architectural abuses introduced by Palladio were—

1. Brackets to support columns.
2. Breaking of Pediments.
3. Undue proportion of cornices.
4. Rustication of columns.
5. Columns and pilasters interpenetrating.
6. Do. do. and joined at end of building.
7. Coupling columns.
8. Enlarging the metope in the Doric order.
9. Leaving out the tailloir in the modern Ionic column.
10. Running up the order through three stories.
11. Joining the plinth of the column to the cornice of the pedestal by an inverted cavetto.
12. Breaking the entablature over the column.

Although the Egyptians claim the honour of the invention of sculpture and painting, the extravagant and disproportionate nature of their early productions—with some most remarkable exceptions—may justify me in saying that it is to Greece and her colonies that is due the credit of the establishment of regular schools for the inculcation of true principles, and the development of natural genius. Dividing the history of the progress of Grecian art into three eras—

1. That of the Marathonian B.C. *about* 500.
2. That of the Pericles B.C. *about* 440.

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* From A.D. 800 to A.D. 1150.
† „ A.D. 1066 to A.D. 1200.
‡ „ A.D. 1200 to A.D. 1350.
§ „ A.D. 1350 to A.D. 1450.
‖ „ A.D. 1450 to A.D. 1530.

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3. That of Alexander the Great B.C. *about* 330.

The schools of Athens, Corinth, Sicyon and Thebes, Ephesus and Rhodes, have in succession risen, flourished, and waned. They have been followed at a distance by Florence, Rome, Lombardy, Venice, Spain, France, Flanders and Holland, and the Athenian Pericles, and the Roman Julius, and Augustus Cæsar, and Mecænas—the illustrious promoters of all that was excellent in the Fine Arts—presented a noble example to the Foscari, Colonna, Medici, the Farnese, and the Pitti of a succeeding era in their respective times.

Of the ancients, many practised in perfection both arts of sculpture and painting, and amongst the most distinguished was Praxiteles, who laboured with incessant assiduity, and produced not only his unrivalled Venus, but also a multitude of the most beautiful statues, of which it would have been difficult to have ascertained the most excellent, but for an ingenious artifice of a rather notorious beauty of Athens, named Phryne, of whom he was enamoured.

She had for some time importuned him to present her with that one of his works which he considered the most perfect and most highly finished; and though he could not *directly refuse* to comply with the demand, urged with all the engaging perseverance of an accomplished and fascinating woman, he endeavoured to evade the performance of it by pretending an inability to declare which was the most excellent.

Wearied by his continued procrastination, and piqued that her frequent and warm solicitations were not responded to, she at length, by a playful stratagem, extracted from him the unwilling secret.

When he paid her one of his accustomed visits, she caused one of his servants, whom she had gained over to her purposes, to rush into her chamber in breathless haste, and announce to Praxiteles that his studio was on fire, and that a portion of his works was already destroyed.

"Which shall we endeavour to save?" exclaimed the artful Phryne with a well-feigned solicitude.

"Alas!" cried the sculptor, "I am undone if the flames have not spared my Satyr and my Cupid."

To his equal surprise, delight, and vexation, the smiling favourite turned to him with her most enchanting air, and said—

"Be not alarmed, your works are free from danger; but I am now mistress of the secret you have so long and so successfully concealed. The Cupid shall be mine!"

A similar but not so innocent, experimental pleasantry

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was practised by Alexander the Great on his Secretary, Eumenes. When he was about to fit out a fleet for his Admiral, Nearchus, to explore the Indian Seas, he found his treasury exhausted, and applied to Eumenes to supply him with 300 talents.

Though the Secretary could well afford to advance the money, he pretended that it was in his power to advance only 100 talents; and he accompanied his offer of that sum with a protestation that the King would find it almost impossible to procure as much money as he required.

Alexander was hurt at the conduct of Eumenes, and refused the loan; but, resolving to convict him of his falsehood, he gave private orders that the quarters of Eumenes should be set on fire. His orders were obeyed, the tents consumed, and amidst the ruins was found a mass of molten gold and silver equal in value to 1000 talents.

The King silently enjoyed his malicious triumph, but took none of the money.*

In the schools of Greece the pupils were taught Literature, Gymnastics, Music, and the art of Design, and to perfect them in the latter they were instructed in the science of Anatomy—though *post-mortem* examinations were rare—with Osteology, Myology, and Angiology, which treat of the disposition of the human frame, and its component parts—the bones, muscles, and blood-vessels, a knowledge of which is essential to comprehend and accurately pourtray the true position the members occupy when, undergoing certain physical changes, the body assumes different attitudes or undertakes various labours, and the mind is influenced by various emotions or agitated by different passions.

They were taught in particular to observe those most prominently developed—such as the frontal, temporal, and jugular of the head and neck; those of the angles of the eyes, nose, and mouth; the pectoral mammary and hypogastric of the front part of the body, and the glutei of the back, the flexors and extensors of the arm, with the femoral, popliteal, and tibial of the leg.†

They were led to the study of Geometry and Optics, and thence derived correct notions of lineal and aerial perspective, and the judicious alternation and appropriate distribution of light and shadow; and of this we have an admirable instance in what is recorded to have occurred at Athens, when Phidias and Alcamenes were each employed

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* Plutarch.

† *Pliny* mentions them, XIX., 5.

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to make a statue of Minerva, the most beautiful of which was to be placed on a lofty pedestal.

That of Alcamenes, when finished, was placed by the side of that of Phidias, on the ground, and exposed to public view. When inspected at a little distance, it was pronounced to be admirable, and immeasurably superior to that of Phidias, which, with open mouth, nostrils dilated, and exaggerated features, was considered rude and gross.

"Set them," cried Phidias, enraged with the ridicule with which his work was assailed, "Set them where they are to be placed." It was accordingly done.

The Minerva of Alcamenes, when elevated above the people, appeared insignificant and devoid of expression; while that of Phidias displayed an air of majesty and grandeur which the spectators could never sufficiently admire.

Phidias now received the praises formerly showered on his rival, who retired overwhelmed with confusion, bitterly lamenting his neglect of the study of Optics.

Of Mineralogy and Chemistry the pupils were also required to possess some knowledge, in order to select colouring matter from different pigments and vegetable substances—as Polygnotus obtained a blueish black from vine stems and lees of wine—and to secure colours the most mellow and durable. Of these Pliny enumerated the white of Melos, the yellow of Athens, the red of Sinope, and the common black, which were all he says they used.

For though they mixed oil with wax in their encaustic paintings, which were burnt in, it is supposed that they were unacquainted with the method of painting in oils as practised in modern times; as it is said they also were with the use of canvas as a substance on which to design. That was first used, it is asserted, at Rome, in the time of Nero, when a likeness of that tyrant, 120 feet high, was taken. Instead of canvas they used for their tabular pictures wood, copper, ivory, or marble.

Nevertheless, as Pliny observes*, with these four colours, Apelles and Melanthius—most illustrious painters—produced their immortal works, of which one was of such value that the whole wealth of a great city could hardly suffice to purchase it.

Finally, that they might succeed in completing a work perfect in all its requisite components of invention, composition, design, colouring, and expression, with appropriate scenery, costume, and drapery, they were made to render

* *Lib.* XXX.

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themselves familiar, not only with the works of nature, but with those of the historian, the poet, and the philosopher.

We are informed that Phidias, being asked whence he had derived the idea of his Jupiter Olympius—which he made for the people of Elis after he had retired in disgust from Athens, and which surpassed in majesty the Minerva he finished for the Athenians—acknowledged that he had heated his imagination by a repeated perusal of Homer's description of the god in the *Iliad*, thus rendered by Mr. Pope—

> "He spoke, and awful bends his sable brows,
> Shakes his ambrosial curls and gives the nod,
> The stamp of fate and sanction of the God:
> High Heaven with trembling the dread signal took,
> And all Olympus to the centre shook."

The excellence of this remarkable statue must have been very great indeed, when we find so many authors alluding to it.

Quintilian says of it—"The splendour of this work seems to add something to the impressive force of the received religion."

Plutarch, in his life of Paulus Æmilius, says that when he entered the city of Olympia, after having defeated Perseus, King of Macedonia, he exclaimed on beholding it—"This Jupiter of Phidias is the very Jupiter of Homer."

And Seneca observes—"Phidias did not see Jupiter, yet he represents the god, as it were, about to launch his thunderbolts; nor did Minerva stand before his eyes, yet he exhibits her so that one would say that she was on the point of instructing the beholders, and that she was only silent through modesty."

Charming delusion, grateful imposture, which deceive without inducing error, and elude the senses only to enlighten the soul.

The spirit of emulation and love of renown have been at all times admitted to be the most powerful incentives to the development of talent, which thence derives unusual vigour and excellence unknown before; and the assemblage of youth glowing with enthusiasm, and ardent in the pursuit of the honours allotted to successful rivalry, stimulated the ambitious to desert the beaten path of mediocrity, and surpass even their instructors in the Fine Arts.

If, at the first, *in*discriminate praises afforded equal encouragement to all, they excited at the least an unconquerable appetite for fresh applause; while the strictures of the *dis*criminating critics of a later period struck terror into the breast of him who put forward crude notions, proceeded

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upon fallacious principles, and who, in an attempt to produce a triumph of professional skill, abandoned the guidance of nature; and thus attention was directed to errors to be avoided in future.

Perceiving, however, that in the survey of the physical world, objects the most pleasing and charming were not free from blemish and defect, and that beauty and deformity were too often witnessed in close proximity, the professors of these arts applied themselves to produce by their works gratification of a description more exalted than that which nature herself produced in hers.

They desired to behold and to represent only subjects perfect in all their parts, and, creating for themselves a sphere which fancy peopled with imaginary forms of the greatest excellence, visible to the mental eye alone, they reached and embodied a model styled "Ideal Beauty."

The point of abstract and purely poetical perfection was attained by those ancient Greek masters who copied the various beauties they beheld dispersed in different bodies, and, combining them, formed thence the type of complete loveliness.

This Zeuxis is related to have done when requested by the inhabitants of Crotona to make a painting of the Grecian Helen, to be placed in the temple of Juno Lacinia; and that he might not want a model, they sent him a number of the most remarkable beauties of their city.

The painter retained five, from whose elegancies and charms united he conceived in his mind the form of the most beautiful woman his imagination could pourtray—a form which he at last delineated with surprising success.

This circumstance is happily conveyed by the poet:—

> "Nor less thy pencil with creative touch,
> Shed mimic life, when all thy brightest dames
> Assembled, Zeuxis in his Helen mixed.
> And when Apelles, who peculiar knew
> To give a grace that more than mortal smiled,
> The soul of beauty, called the Queen of love,
> Fresh from the billows blushing orient charms."
>
> —THOMSON'S "Liberty."

From the theatres of these scholastic institutions a feeling of veneration for the refined sciences diffused itself throughout the community, until it insensibly became a national characteristic.

Greece wept when Timanthes exhibited his picture of Iphigenia Bound upon the Altar, over whose devoted head Calchas, full of the god, extends the sacrificial knife.

Upon the countenances of the spectators of the painting

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are reflected the terror, horror, and pity in it so inimitably delineated; and spell-bound, as it were, they gazed in transport on the piece.

The priest was represented overwhelmed with grief, Ulysses in still deeper dejection, and the features of Menelaus, the uncle of the tender victim, displayed all the affliction which the power of art could pourtray.

Having exhausted the lineaments of grief, and unable to express with sufficient dignity a father's anguish, the painter veiled the face of Agamemnon in his robe, leaving the beholder to *imagine* what was passing in the monarch's breast.

The growth of this feeling gained additional strength from the aid of the kindred arts of Poetry and Eloquence, and those who heard the sublime verses of Homer and the lofty strains of Pindar, were fired by the eloquence of Pericles, Antiphon, Lysias, Isæus, Æschines, and Demosthenes; who witnessed the representation of the tragedies of Æschylus, Sophocles, and Euripides, and who beheld the works of Phidias, Myron, Praxiteles, and Apelles, could not be content to have before their eyes that which was rugged or uncouth, could not endure unbecoming garments or ungainly movements, and could not tolerate unrefined diction, unmelodious sounds, savage customs*, cruel laws, or barbarous ceremonies.

From this eulogy I must exclude the Lacedemonians, those austere men who proscribed those indulgences which, according to their ideas, effeminated the masculine genius of the people; who banished the arts, expatriated the polite sciences, and by a public ordinance condemned the musician Timotheus† to abridge four chords of his lyre, a severity not unlike that of Cato the Censor, who hastily dismissed from Rome (B.C. 155) the Athenian Ambassadors, Carneades of Cyrene, Diogenes the Stoic, and Critolaus the Peripatetic, expressing his apprehension that the attractions of their philosophical dissertations might captivate the minds and undermine the simplicity and valour of the Roman people, whose sole profession was, as he sternly observed, arms and war.

It gives me much satisfaction to remark that one effect produced by the cultivation of these arts was a regard for decorum and a love for virtue and modesty, and the reverend sages of the Pagan world were uniform in their

* Nevertheless, Themistocles, the deliverer of Greece, offered up as a sacrifice three young men.

† Corœbus and Hyagius also added to it.

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denunciation of all licentious sculptures and paintings. For although we have the authority of Horace for "The deceiver cites historical incidents which are lessons for sinning*," we find Aristotle in the *Politicks* recommending the magistrates and instructors of youth to consider it one of their most important duties to prevent the exhibition of such statues or paintings; "Seneca declaring that sculpture and painting cease to be worthy of the name of liberal arts when they tend to corrupt youth and promote vice;" Pliny, the most ardent of the ancient writers in his love for, and the most minute in his description of, the Fine Arts, publicly branding the celebrated Arellius as guilty of remarkable turpitude in polluting Science by such pravity of taste; and lastly, the touching moral in the Elegies of Propertius, thus rendered:—

> "Whence rise these fanes to virgin modesty,
> If every wife to every thing is free?
> Who first obscenity in colours drew,
> In the chaste house who placed it first in view,
> Defil'd the innocent maid's ingenuous eyes,
> And would not leave her ignorant of vice.
> Woe to the man whose vicious pencil taught
> In grateful tints to urge a guilty thought;
> Our father's homes ne'er owned these noxious arts,
> No crimes were painted on their walls or hearts."

The Greeks who, from the Polytheistic nature of their religion, ascribed the regulating influence of a peculiar Deity to all the subdivisions of their social and domestic, as well as of their public undertakings, gave to the Artist the congenial cultivation of the worship of Apollo, the Goddess Minerva, the Muses, and the Graces, and presiding, as Minerva was supposed to do, over reason, sense, and taste, her aid was invoked by her humble votaries when desirous to excel.

Thus it was that Architecture, Sculpture, and Painting, presented to the people a visible history, enriched with all the attractions derived from fiction, allegory, and religion; addressed themselves to the multitude as perpetual records of the noble deeds of the nation, and preserved for its contemplation the achievements of men renowned for every virtue, civil or military, public or private, and the forms of women famed for every grace and charm.

> "Heroes, in animated marble, frown,
> And legislators seem to think in stone."
> —POPE'S *Temple of Fame.*

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* "———— *Peccare docentes*
Fallax historias monet."

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They kindled that pure flame of patriotism and that exalted spirit of liberty which were extinguished with their decline; they awakened that love of country, and aroused that martial ardour and heroic self-devotion which resisted the encroachments of Persian hostility, repelled her discomfited armies, and retaliated her arrogant aggression.

They originated that lofty principle which looked upon the approbation of enlightened fellow-countrymen as the highest reward for valour, or for physical or intellectual superiority; and the victors at the Olympic, Pythian, Isthmian, and Nemean games, were content that, as symbols of their success, their brows should be bound with a simple wreath of olive, laurel, apple, palm, pine, or green parsley; and those who triumphed in the cause of their country, or rendered themselves remarkable for their virtue, deemed a statue* erected at the public expense the highest honour they could attain.

When the valour of Miltiades was crowned with victory at Marathon, and Datis and Artaphernes, Lieutenants of the Persian Darius, were driven back ingloriously into Asia, the Athenians considered that the most suitable recognition on their part of his noble exertions in preserving them from a foreign yoke was that he should be depicted by the painter Panenus, brother of Phidias, in a prominent and commanding attitude in the foreground of a picture of the battle.

Alexander the Great, when anxious to excite his soldiers to perform fresh prodigies of bravery, displayed to them the portraits of the 25 men of his Horse Guards who perished at the passage of the Granicus B.C. 334, and he employed Lysistratus to execute in bronze their figures on horseback, as large as the life, which statues were erected at Dia, a city in Macedonia, whence they were, a long time after, removed to Rome by Quintus Metellus, and, incredible as it may appear, were sold, it is said, in the time of Augustus, for their weight in gold.

When Epimenides the Phæstian, of Crete, visited Athens —he who was reckoned one of the seven wise men by those who do not admit Periander into the number—and by his lustration of the city, and reform of many superstitious abuses, had conferred essential service, he was held in great admiration, distinguished honours were paid to him, and no limit was set to the rewards which the people would have

* It is said that the Athenians were so highly pleased with the equitable administration to public affairs by Demetrius Phalareus, the disciple of the celebrated Theophrastus, that they erected 360 statues in honour of him—though, with the inconstancy peculiar to democracies, they were, at the suggestion of certain seditious opponents, at a subsequent time removed.

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gladly heaped upon him. However, the philosopher modestly selected a branch of the sacred olive, and, satisfied with that type of the public gratitude, he departed.

It is not surprising to find that a people so sensitively alive to the beauties of the productions of the Fine Arts should have entertained the highest respect for the professors of them.

In all public entertainments particular seats were allotted to them, in travelling from place to place they were allowed peculiar privileges, exempted from tolls and taxes, and permitted to enjoy several exclusive advantages. Indeed, so grateful were the Greeks for the exertions of Polygnotus, who painted gratuitously the Pœcile at Athens and the Hall at Delphi, called Lesche, that it was ordained by a Decree of the Amphictyonic Council that he should be maintained at the public expense. Nay, even war with all its horrors respected the studio of Protogenes, and when Demetrius besieged the city of Rhodes, he refused to set fire to that part of it which might have made him master of the whole, because he was informed that its famous artist was then engaged in finishing his celebrated picture of Jalysus†, the founder of Rhodes, supposed to have been the son of Apollo. This painting, which was his master-piece, is said to have occupied the painter seven years, and a fortunate accident achieved for him the perfection which his most intense application could not attain.

He laboured without success to represent in the picture a dog panting, with froth around his mouth; and, dispirited by repeated failures to produce an effect satisfactory to himself, in a paroxysm of despair he flung his sponge at the painting. The fall of the sponge, to his great amazement, produced—what the utmost labour of art had failed in doing—the most natural appearance of froth at the mouth of the dog; and, resuming his pencil, he concluded his work, which was received with well-merited applause.

When Rhodes capitulated, the conqueror visited Protogenes, and found him in his garden employed in his usual avocations. Surprised at his apparent indifference to what was going on around him, he inquired why he did not display more concern at the general misfortune? The painter replied, "that he knew Demetrius made war against the Rhodians, not against the Fine Arts."

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* *Pliny, Lib.* 35, 55, 7, 39.

† Jalysus was the son of Cercaphus and Cydippe or Lysippe, grandson of Helios, the son of Apollo, and elder brother of Lindus and Cameirus.—*Pindar Olymp.*, vii. 74. *Eustathius ad Hom.*, 315.

Phœbeamque Rhodon et Jalysios Telchinas.
Quorum oculos ipso vitiantes omnia visu.
Jupiter exosus fraternis subdidit undis.

—Ovid, *Lib. vii., Fab.* 10.

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Singular to say, a similar event occurred during the siege of Rome by the Connestable Bourbon, A.D. 1527. Some soldiers broke into the studio of Francesco Mazzuoli, called Parmegiano, and found him at work at his easel. Awed into admiration and respect by the presence of the great painter, abstracted from the horrors of the sack of the city in the pursuit of his art, they retired, leaving him unmolested.

A like instance of noble regard for Science, almost in our own times—and in which all those who now inhabit this hemisphere should feel peculiar interest—was displayed by the philosopher, Benjamin Franklin, at the time he was Minister Plenipotentiary from the Congress of the United States to the Court of France, in the year 1778:—

He addressed the following circular letter "to all captains and commanders of armed ships acting by commission from the Congress to the United States of America, now at war with Great Britain," which no encomium of mine can too highly commend.

"Gentlemen—A ship having been fitted out from England before the commencement of this war, to make discoveries of new countries in unknown seas, under the conduct of that celebrated navigator, Captain Cook—an undertaking truly laudable in itself, as the increase of geographical knowledge facilitates the communication between distant nations in the exchange of useful products and manufactures, and the extension of arts; whereby the common enjoyments of human life are multiplied and augmented, and science of other kinds increased, to the benefit of mankind in general—this, therefore, is most earnestly to recommend to every one of you that, in case the said ship which is now expected in the European seas on her return should happen to fall into your hands, you will not consider her as an enemy, nor suffer any plunder to be made of the effects contained in her, nor obstruct her immediate return to England by detaining her or sending her into any port of Europe or America; but that you will treat the said Captain Cook and his people with all civility and kindness, affording them, as common friends to mankind, all the assistance in your power, which they may happen to stand in need of. In so doing you will not only gratify the generosity of your own dispositions, but there is no doubt of your obtaining the approbation of Congress and your own American owners.

"I have the honour to be, Gentlemen,

"Your most obedient, &c.,

"BENJAMIN FRANKLIN."

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The instructions given by the Lords of the Admiralty to Sir James Ross in September, 1839, previous to his undertaking the voyage of Antarctic discovery, evince the progress of the same enlightened feeling, and the following paragraph is extracted :—

"In the event of England being involved in hostilities with any other power during your absence, you are clearly to understand that you are not to commit any hostile act whatever; the expedition under your command being fitted out for the sole purpose of scientific discoveries, and it being the established practice of all civilised nations to consider vessels so employed as exempt from the operations of war.

"Confiding in this general feeling, we trust that you would receive assistance from the ships and subjects of any foreign power with which you might fall in; but if the case should arise, special application to that effect will be made to the respective governments.

"June 6th, 1843."

How admirable this pure spirit of benevolent philanthropy, and how different was the conduct of that nation which seized the tiny bark of the adventurous Flinders, when, after various perils and sufferings incurred in exploring these seas and coasts, he, on his homeward passage, ventured into the Mauritius, fondly hoping that though its people were at war with his countrymen, they had not taken up arms against the arts which increase knowledge, encourage enterprise, reward industry, and "multiply the enjoyments of human life." Consonant, indeed, such conduct with those acts of rapacity by which Italy, Spain, and Portugal, were plundered of their choicest works of art, under the specious pretext of the intended embellishment of the capital of France.

But the noble-minded conqueror acknowledges no such principle of spoliation, philosophy admits no such hollow sophism, science suffers no such desecration of those universal pandects, respecting the property in works of genius and art, which bind alike all countries, climes, and people, who recognise their sway.

A true veneration for these sciences did not dictate these proceedings; but an illiberal jealousy of the superiority of others; a vain appetite for ostentatious display, an ungenerous desire to humiliate the vanquished.

Far different, indeed, is that pure and enlightened spirit of respect with which those regard the works of art who feel in sincerity imbued with their social importance; who have the candour to own that, as regards intellectual superiority, an

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acquaintance with them places the humble artisan in a station more dignified than that occupied by his ignorant though wealthy fellow-citizen. Without which, indeed, wealth enriches not, honours do not distinguish, titles cannot ennoble.

These arts, the aliment of youth, the delight of old age, which adorn prosperity, which afford to adversity a refuge and a solace, which cheer us in the sleepless hour of night—which calm the troubles of our distempered hours—which smooth and soften the rugged asperities of contentious fortune; without which life is sordid, existence sensual!*

That such a *spirit of respect* for the Fine Arts may grow up vigorously in this land of our adoption, I most fervently hope; and I may, I trust without presumption, confidently predict that its people, not intent on the accumulation of worldly gains alone, may win for themselves a character for refinement, and for the encouragement of the liberal, as well as the simply useful, sciences. As evidence that my prediction is not based upon fallacious hypothesis, I appeal to this capacious, substantial, and not inelegant building, reared I may literally assert in the wilderness, in the sixth year after the permanent establishment on these shores of civilised man, which, if it vie not in splendour and magnificence with the Pœcile†, the Portico of the Academus or the Museum‡ of Ancient days, I may, without ostentation, declare, owes its origin, not to the testamentary benevolence of a wealthy citizen, nor to the munificence of an affluent monarch delighting in the advancement of learning, but to the enterprising genius, the persevering exertions and generous contributions of those of lowly birth and unobtrusive calling, to the inquiring thirst for knowledge in the humble mechanic—a building to which many an ancient town and city in Great Britain can exhibit no parallel. I may appeal to the support which this meritorious institution has received

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* Satan, in his description of Athens, says:—

"Then view the schools of ancient Sages—his who bred
Great Alexander to subdue the world;
Lyceum there, and painted Stoa next."—*Milton.*

† The Pœcile was adorned with paintings by Polygnotus.

‡ The Museum was at Alexandria, in Egypt, founded by Ptolemy Philadelphus B.C. 280. From the renowned cities of antiquity, Athens and Alexandria, and the sharp sight, quick perception, and refined manners of the inhabitants, are derived the terms—

Astute, from Αστυ, the City of Athens.
Polished „ Πολις, „ Alexandria.

Urbanity is traced from *Urbs*, the City of Rome, which distinguished the behaviour of its citizens from that of the Rustics, who lived in the country —*Rus.*

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during years of extensive commercial embarrassment, to the struggles it has encountered, the difficulties it has, I rejoice to say, overcome; to the extent of the library, which, though not so large as the Alexandrian, contains several useful works, to the nucleus of its collection of objects of natural history, and to the number of members; and lastly, were further proof requisite, I would thankfully advert to the gracious attention with which this crowded assembly has indulgently done me the honour to hear this, my imperfect exposition of the subject.



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THE LATE LECTURE.

To the Editor of the Port Phillip Patriot.

Sir—In a note to your publication of my lecture, read before the Mechanics' Institute last week, in your paper of this morning, you remark—

"Long before Ion's time, Iaones were among the ancient inhabitants of *the country*, and Herodotus affirms that the Ionians were Pelasgic and Aboriginal.—ED. *P. P. P.*"

As I feel assured that your only motive in adding this note was to set your readers right upon a point on which I had misled them, I should submissively accept your correction did you convince me I was in error; but as you mention Herodotus, allow me to quote him to establish my text.

He says *(Polymnia* X. civ.)—"The Ionians, armed like the Greeks, appeared with a fleet of one hundred ships. *According to the Grecian account*, this people when they inhabited that part of the Peloponnesus called Achaia, before the arrival of Danaus and Xuthus, were called Pelasgian Ægialians"—or Pelasgians living by the sea-shore—not Iaones nor Aborigines, as you state; though it is true that the Pelasgians are generally esteemed a very ancient people. "They were afterwards named Ionians from Ion, son ot Xuthus."

But you must observe that, though these are apparently the people of whom you speak, they are not those to whom I allude: I refer to the Ionians who inhabited Ionia—not the Peloponnesus—in Asia Minor—not in Greece—containing the 12 states—Chios, Clazomene, Colophon, Ephesus, Erythria, Lebedos, Miletus, Myus, Phocæa, Priene, Samos, and Teos. The history of the people is briefly this*:—

Deucalion and Pyrrha left two sons, Hellen and Amphictyon, and a daughter, Protogenia.

Hellen, who married, as I stated, Orseis, left three sons, Æolus, Dorus, and Xuthus: the first is said to have given his name to the Æolians, and is not to be confounded with the son of Hippotas, the alleged inventor of sails for ships, whence he was deified as the god of the winds. Of whom Homer says—

> "At length we reach Æolias' sea-girt shore,
> Where great Hippotades the sceptre bore."—*Ody.* x.

And Ovid—

> "*Et Hippotadæ regnum terrasque calenti.*
> *Sulphure fumantes.*"—*Met.* xiv. 86.

* *Clio*, cxlii.

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And l. 223—

> "*Æolon ille refert Tusco regnare profundo,*
> *Æolon, Hippotaden, cohibentem, carcere ventos.*"

Dorus gave his name to the Dorians.

Herodotus says—"The Lacedemonians of Doric, and the Athenians of Ionic origin, seemed to claim his distinguished preference (*i.e.*, that of Crœsus). These nations, always famous, were formerly known as Pelasgians and Hellenians. The former had never changed their residence, the latter often had. Under the reign of Deucalion the Hellenians possessed the region of Phthiotis, but under Dorus, son of Hellen, they inhabited the country called Histiæotis, which borders on Ossa and Olympus. They were driven thence by the Cadmæans, and fixed themselves in Macednum, near Mount Pindus, migrating thence to Dryopis, and afterwards to the Peloponnesus, where they were known as Dorians."

Also *Urania* xxxi. He says—"The Dorians are the original and principal people of the Peloponnesus."

These are the Dorians I mention, who are to be distinguished from the Dorians of that part of Asia Minor which they colonised, known as Hexapolis, while it included Halicarnassus and Pentapolis, after that city was excluded from the confederacy by the five cities of Lindus, Jalyssus, Camirus, Cos, and Cnidus, because Agasictes, of Halicarnassus, who obtained a victory at the games celebrated in honour of the Triopian Apollo, took away a tripod of brass, the prize at those games, and suspended it in his house, which, as well as the prize won at the games in honour of Bacchus, the victor was not expected to carry away.

Xuthus, after his expulsion by his brothers, married Creusa, daughter of Erechtheus, king of Athens, and had by her a son named Ion, though others assert that Ion was the son of Creusa, by the god Apollo, before her marriage, and that Xuthus adopted him.

Ion gave his name to his subjects, and conducted a colony into Asia Minor.

I did not consider it necessary to cite authority for all the historical incidents alluded to in my lecture, but I noted them with some attention in my manuscript. In the statement to which your note applies, I believe I am not incorrect.

I am, Sir, yours obediently,

REDMOND BARRY.

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To the Editor of the Port Phillip Patriot.

Sir—It was not until this evening that I remarked your second note to my lecture, in which you observe—

"We would submit to the learned lecturer whether he has not disremembered the *true cause* of Cato's apprehensions—and whether it was not the fear that the eloquent pleading of the ambassadors against the fine levied *by the Romans* on the Athenians would have an undesirable effect upon the Roman youth."

You adduce no authority for your proposed emendation, but as your note appears to require an answer, I will disclose mine.

Plutarch, in *Vit. Catonis*, says—When Cato was very far advanced in years, there arrived at Rome two ambassadors from Athens, Carneades the Academic, and Diogenes the Peripatetic.—Aulus Gellius mentions a third ambassador, Critolaus the Peripatetic, and in this particular I have adopted his authority.

They were sent to beg the remission of a fine of 500 talents, which had been imposed upon the Athenians—by whom? and for what? not by the *Romans*, by the Sicyonians, who had been called in as arbitrators, to determine the amount of compensation due to the people of the city of Oropus, on account of the Athenians having in an unjustifiable manner plundered that city; and who, because the Athenians refused to appear before them, fined them for their contumacy.

Upon the arrival of these philosophers, such of the Roman youth as had a taste for learning, went to wait on them, and heard them with wonder and delight. Above all, they were charmed with the graceful manner of Carneades who, the force of his eloquence being great, had drawn an audience of the most considerable and polite persons in Rome; and the sound of his fame, like a mighty wind, had filled the whole city.

The report ran that there was come from Greece a man of astonishing powers, whose eloquence, more than human, was able to soften and disarm the fiercest passions; and who had made so strong an impression upon the youth, that forgetting all other pleasures and diversions, they were quite possessed with an enthusiastic love of philosophy.

The Romans were delighted to find it so, nor could they without uncommon pleasure behold their sons thus fondly receive the Grecian literature, and follow those wonderful men.

But Cato from the beginning was alarmed at it. He no

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sooner perceived this passion for the Grecian learning prevail, but he was afraid that the youth would turn their ambition that way, and prefer the glory of eloquence to that of deeds of arms.

When he found that the reputation of these philosophers rose still higher, and their first speeches were translated into Latin by Caius Acilius, a senator of great distinction, who had earnestly begged the favour of interpreting them, he had no longer patience, but resolved to dismiss these philosophers upon some decent and specious pretext.

He went, therefore, to the senate, and complained of the magistrates for detaining so long such ambassadors as those, who could persuade the people to whatever they pleased. "You ought," he said, "to determine their affair as speedily as possible, that returning to their schools they may hold forth to the Grecian youth, and that our young men may again give attention to the laws and the magistrates."

I ask you, sir, if my abbreviation is likely to induce error?

I am, Sir, yours obediently,

REDMOND BARRY.

[With respect to our correspondent's first letter, touching the migration under Ion, he has the authority of Herodotus to support him, but what we contended was that the name was not conferred by Ion upon the Asiatic Greeks, but inherited by them from the Achæans, who, *after* their defeat by Tisamenus, the grandson of Agamemnon, joined their kinsmen in Attica, when the migration to Asia Minor took place. We are satisfied that our memory has not deceived us as to the assertion by Herodotus, that the Ionians were Pelasgic and indigenous, although, *at this moment*, we are unable to wade through that voluminous authority to extract the text. Of the name and the time, nothing but fable exist; and upon this point Bulwer, in his *Athens*, vol. 1, says—"Upon the *dim and confused* traditions relative to Ion, the wildest and most luxuriant speculations have been grafted, prolix to notice, unnecessary to contradict." Again, a note to the same authority, vol. 1, page 114, runs thus—"The Ionès are included in this (Amphictyonic) confederacy; they could not then have taken their name from the Hellenic Ion, for Ion was not born at the time of Amphictyon." Rollin, treating of the primitive origin of the Grecians, makes Iavan or *Ion* the grandson of Noah, "certainly the father of all those nations that went under the general denominations of Greeks, though he has been

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looked upon as the father of the Ionians only." The migration from Attica to Asia Minor took place A.C. 1055 (by Rollin, stated A.C. 732), and Iavan or Ion lived A.C. 1330. Again, the authority last quoted says, in the same chapter, that the Hebrews, Chaldeans, Arabians, and others give no other appellation to the whole body of the Grecian nations than that of Ionians. We have not the classic authorities at hand to satisfy ourselves any further upon the point, but we admit our correspondent had the authority of Herodotus for his statement. With reference to the above letter, we hazarded the question from recollection; and although Plutarch is not an infallible Biographer (vide *Muller),* his authority was sufficient guarantee for the lecturer's statement.—ED. *P. P. P.*]

To the Editor of the Port Phillip Patriot.

Sir—In your editorial remarks on my correspondence on the subject of my lecture, there are three statements to which I do not assent. You will allow me to comment on them, and I will no more trespass on your columns. You say—"What we contended for was that the name of Ionians was not conferred by Ion on the Asiatic Greeks, but inherited by them from the Achæans, who, after their defeat by Tisamenus, the grandson of Agamemnon, *joined* their kinsmen in Attica, when the migration to Asia Minor took place."

Permit me to ask, when did you thus contend? or where? or do you so contend now? If you do, it does not confute my statement; but are you *now* correct?

If you turn to *Apollodorus, Lib.* 2 vii., you will see that Tisamenus, son of Orestes, was killed near Helice, a town built by Xuthus, brother of Ion, in a battle he fought with the Ionians. This is rather like turning the tables.

You will find in *Herodotus*, that the Achæans were the people ruled over by Achæus, son of Xuthus, brother of Ion, and were a distinct race; they inhabited the country near Argos, and having been driven thence by the Heraclidæ, they made war on the Ionians, EXPELLED them from the PELOPONNESUS and took possession of their twelve cities;—Pellene near Sicyon, Ægia, Ægæ, Bura, Hellice [to which place the Ionians fled, having been vanquished in battle by the Achæans], Ægium, Rhypes, Patræ, Phæræ, Olenus Dymæ, and Tritœa.*

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* Herod, *Clio.* 145.

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The Javan you allude to, mentioned in Gen. x. 2, and in 1 Chron. 1. 5., lived, according to biblical chronology, about B.C. 2330; Ion, *as you say*, B.C. 1330—there is a slight difference of 1000 years in time between the two eras—is not universally admitted to be the father of all those nations that went under the general denomination of Greeks any more than his father Japheth is said to be the father of the Medes, sprung from his son Madai, or of the Thracians from his son Tiras; for though Greece is in general terms assigned by Rollin to Javan—with which Ionia in Asia has nothing to do—of the sons of Javan, Elishah is said to have peopled the *Peloponnesus*—where your Ionians, not the Ionians in question, are found—as Tarshish did a part of Spain; Kittim Latium in Italy, and Dodanim a portion of Gaul.

The Athenians in gratitude for the services rendered by Ion as their general* in a war with the Eleusinians, under Eumolpus, who was defeated and killed, took the name of Ionès.

I am, Sir, yours obediently,

REDMOND BARRY.

September 17th, 1847.

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* Herod, *Urania* 44.

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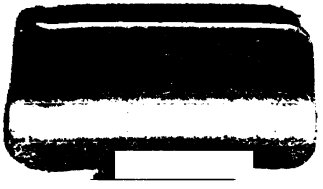
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